

Photo Comparison

{ Initial vs. Sequential Photographs
{ Tagged Coral Colonies Post-Bleaching Event 2014

Brian Neilson and Stacy Bierwagen

DAR AIS TEAM

Brian.j.neilson@hawaii.gov, stacy.l.bierwagen@hawaii.gov



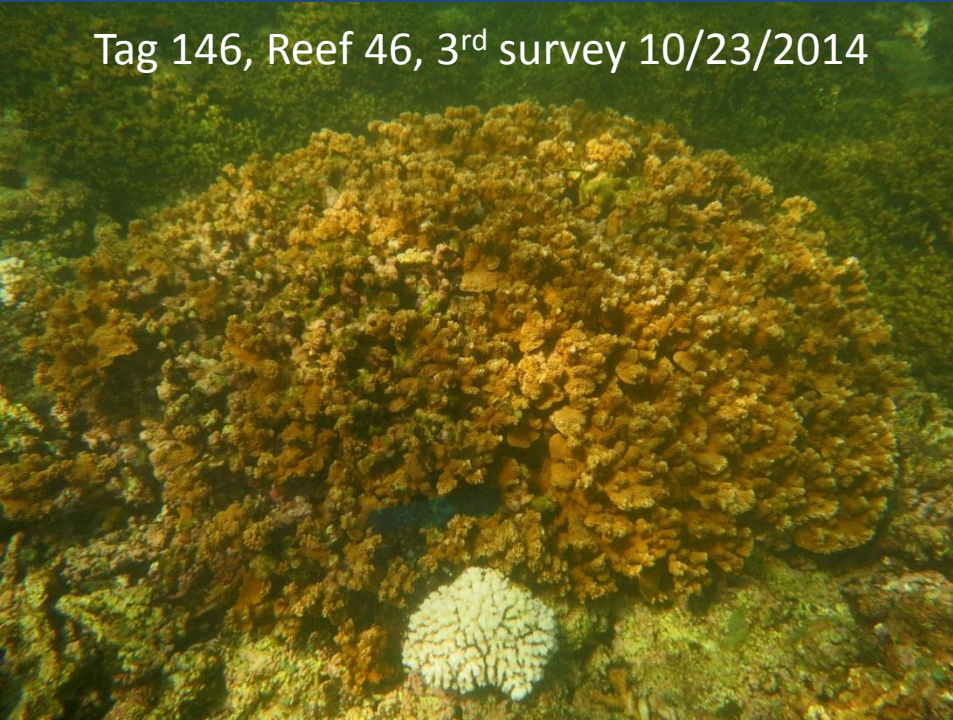
Reef 46



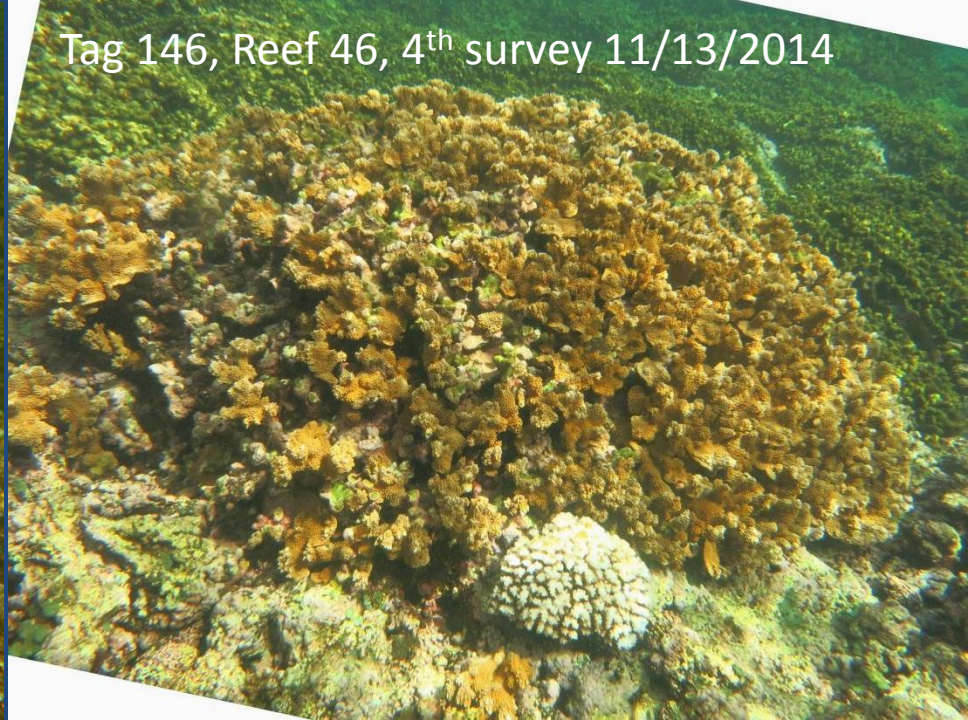
Tag 146, Reef 46, initial survey 10/6/2014



Tag 146, Reef 46, 2nd survey 10/13/2014

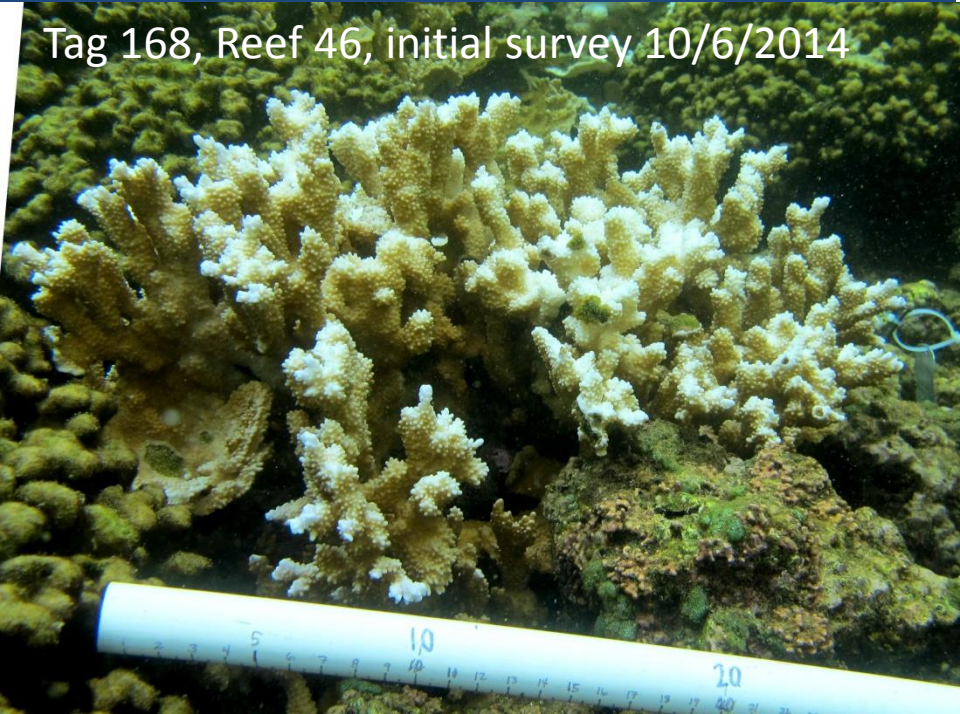


Tag 146, Reef 46, 3rd survey 10/23/2014

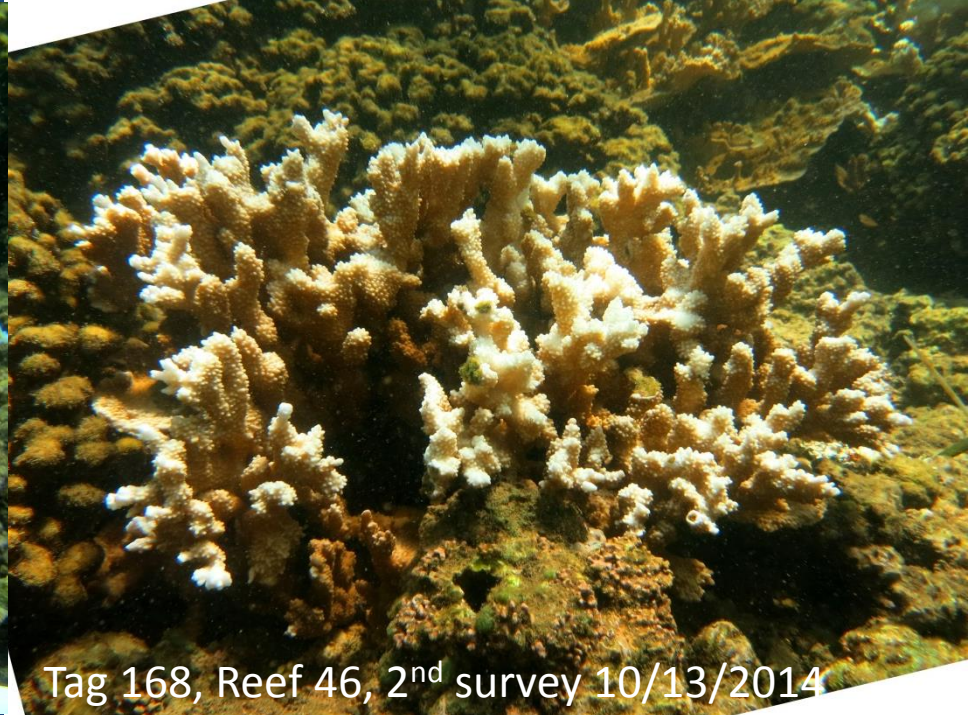


Tag 146, Reef 46, 4th survey 11/13/2014

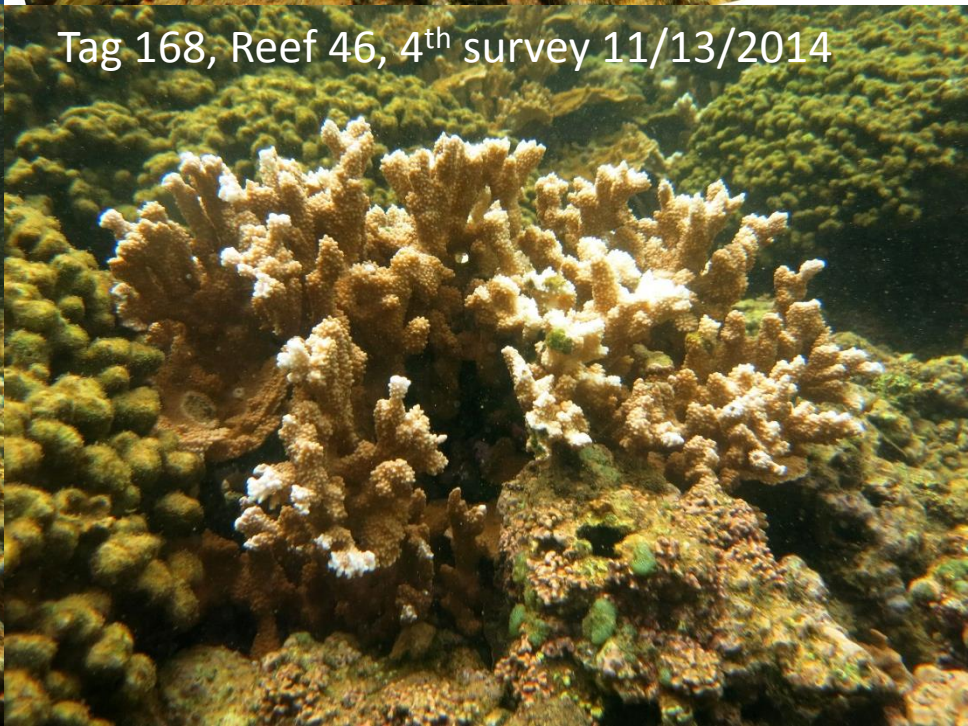
Tag 168, Reef 46, initial survey 10/6/2014



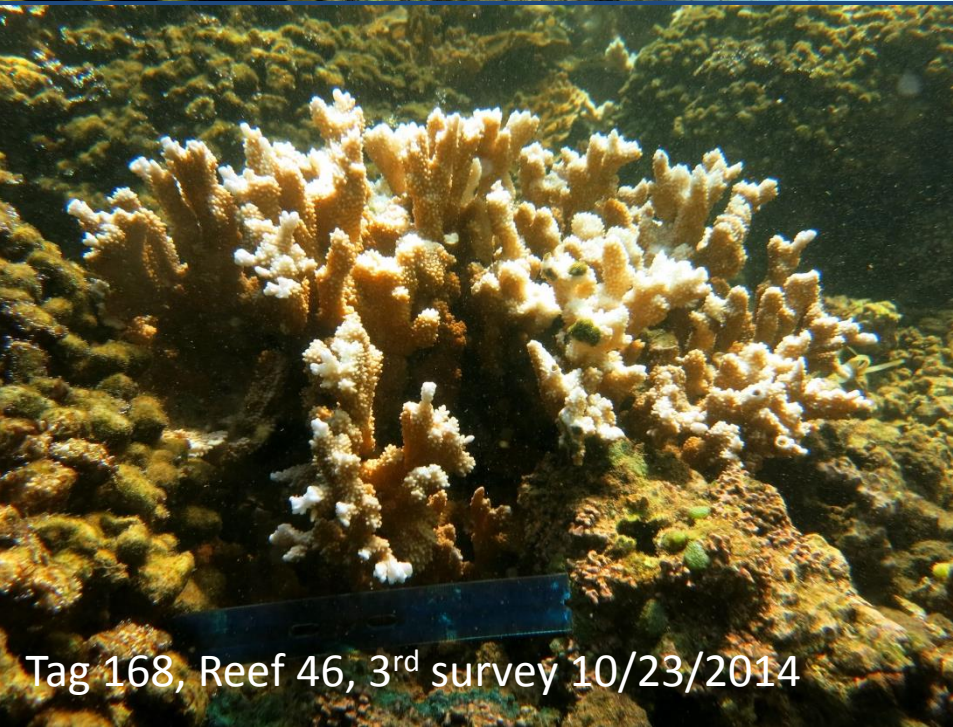
Tag 168, Reef 46, 2nd survey 10/13/2014



Tag 168, Reef 46, 4th survey 11/13/2014

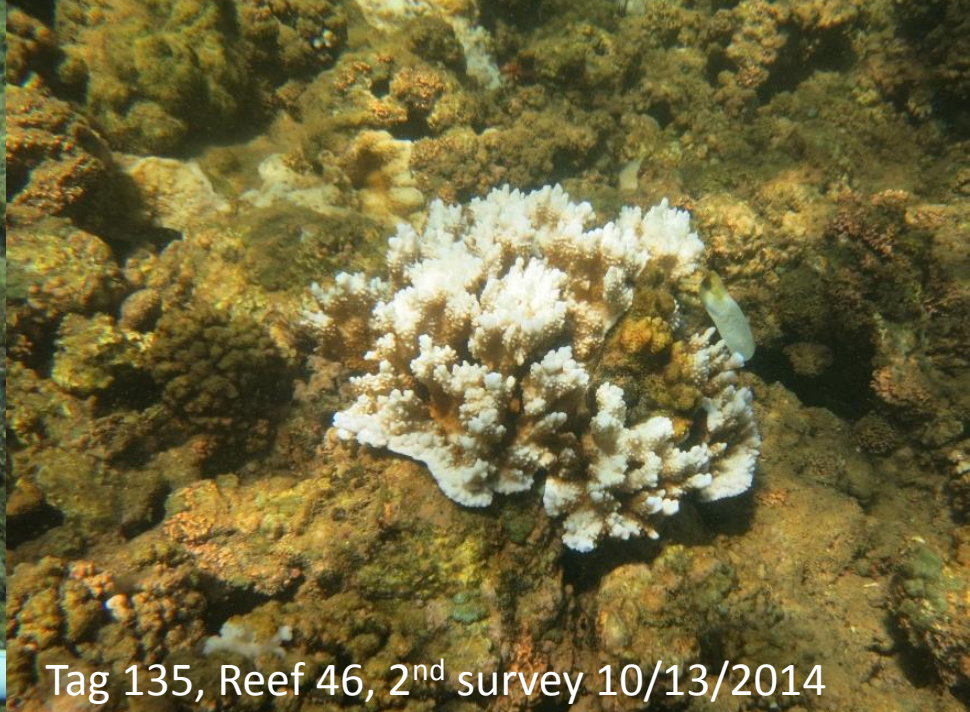


Tag 168, Reef 46, 3rd survey 10/23/2014

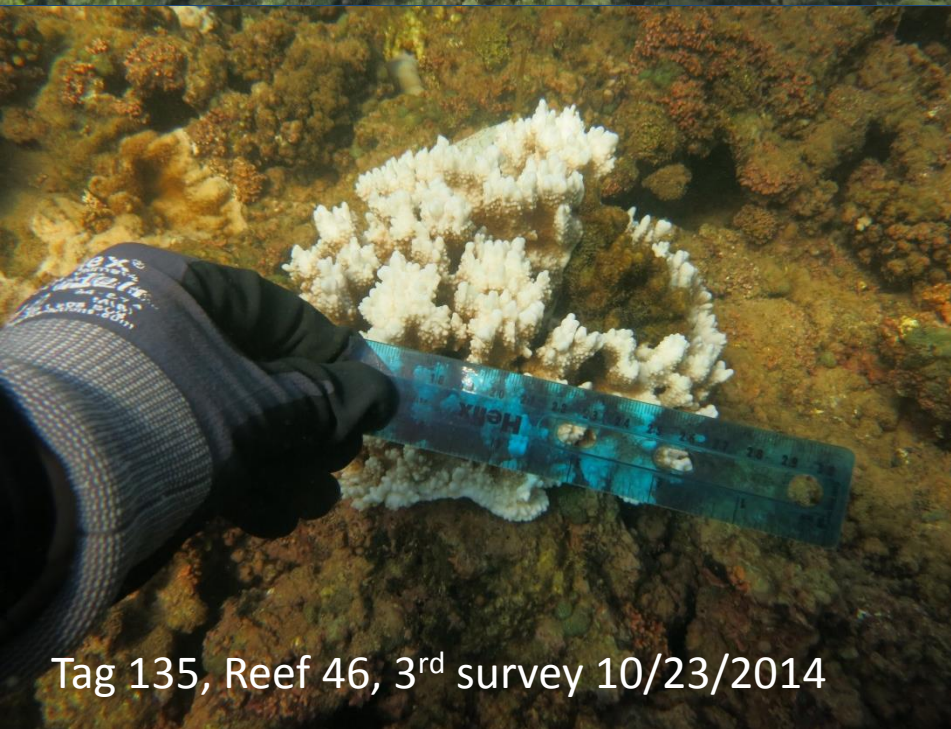




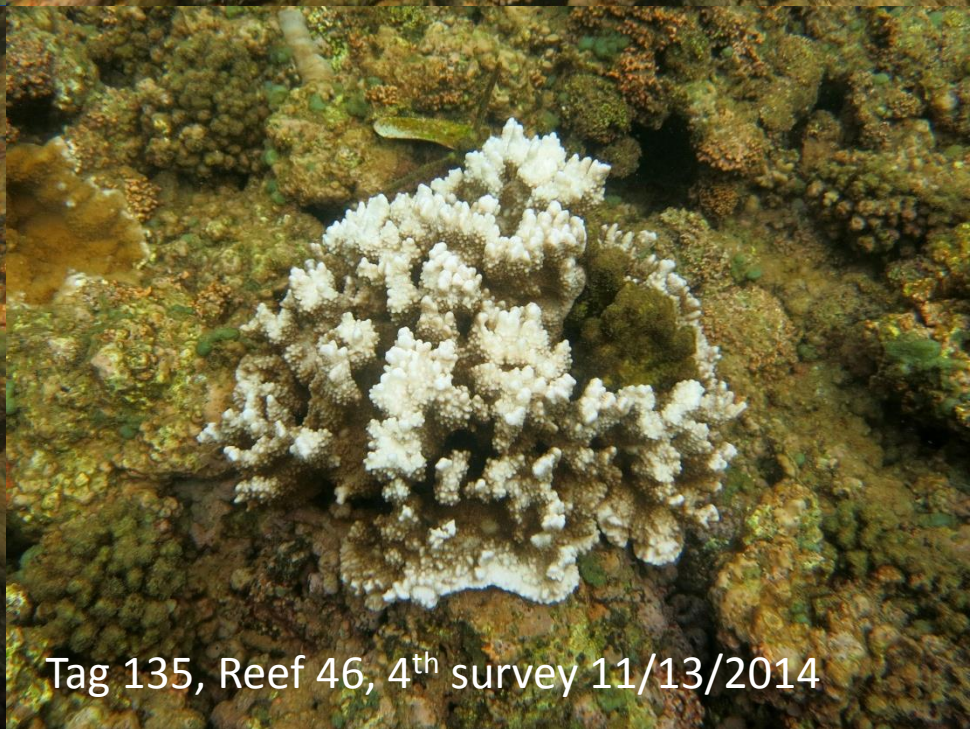
Tag 135, Reef 46, initial survey 10/6/2014



Tag 135, Reef 46, 2nd survey 10/13/2014



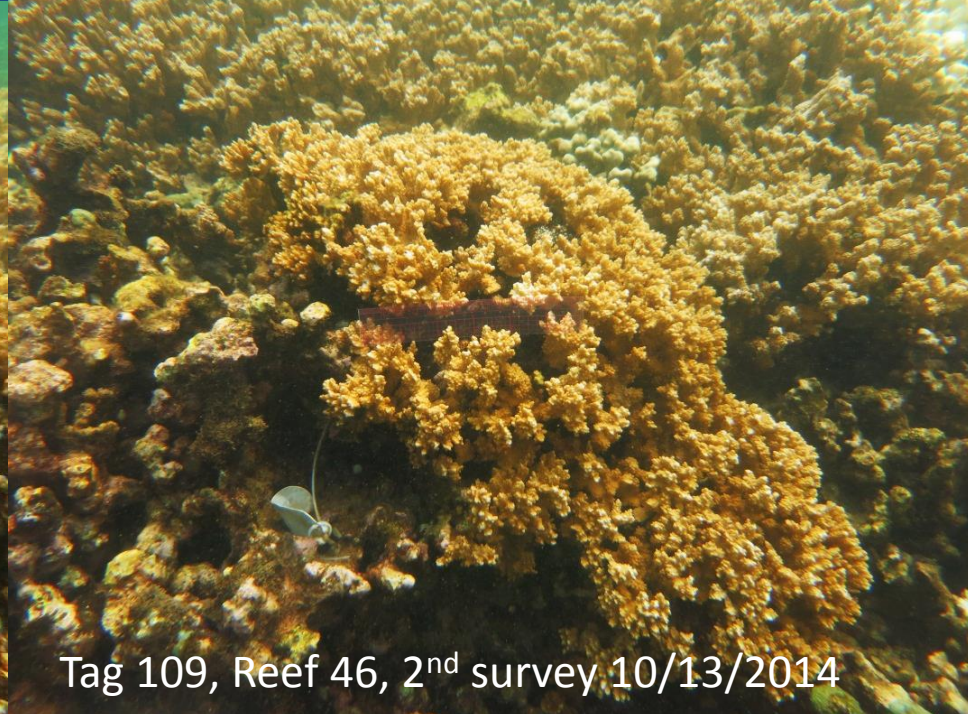
Tag 135, Reef 46, 3rd survey 10/23/2014



Tag 135, Reef 46, 4th survey 11/13/2014



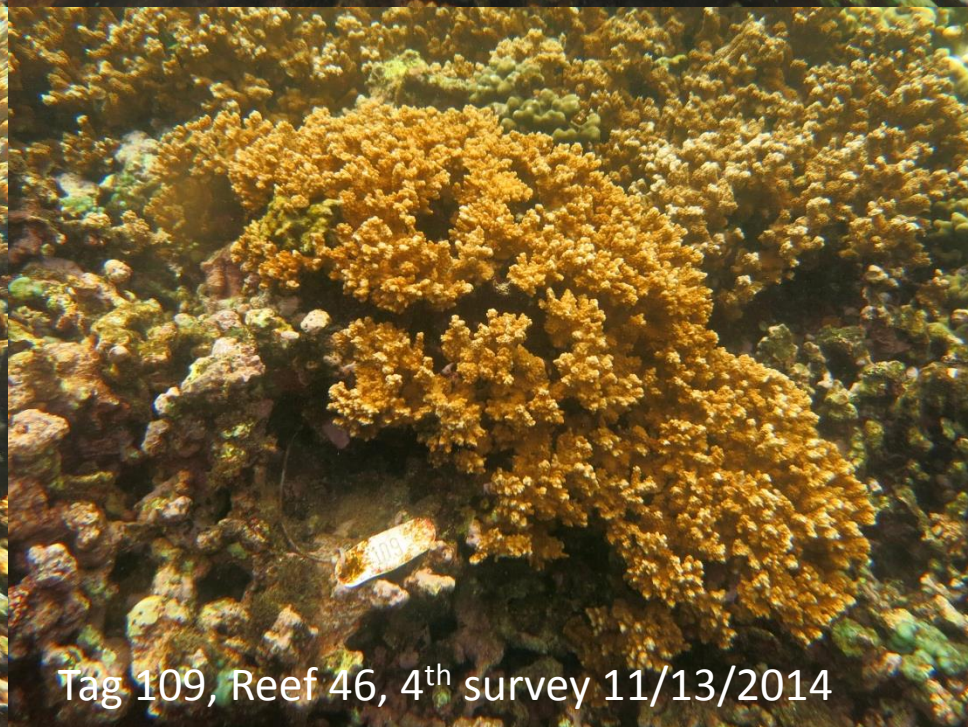
Tag 109, Reef 46, initial survey 10/6/2014



Tag 109, Reef 46, 2nd survey 10/13/2014



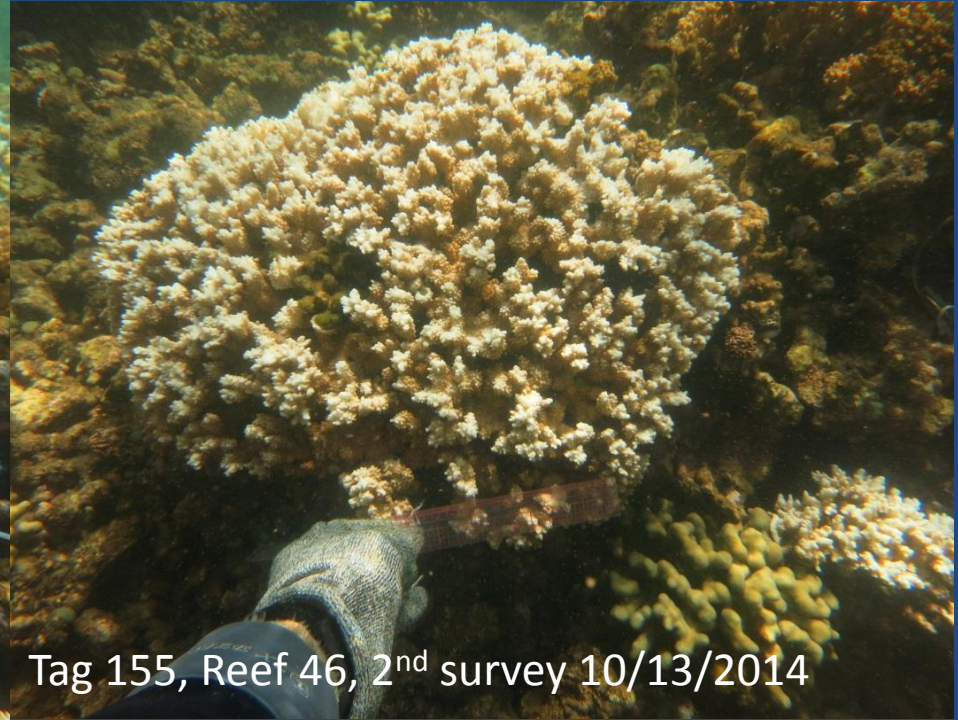
Tag 109, Reef 46, 3rd survey 10/27/2014



Tag 109, Reef 46, 4th survey 11/13/2014



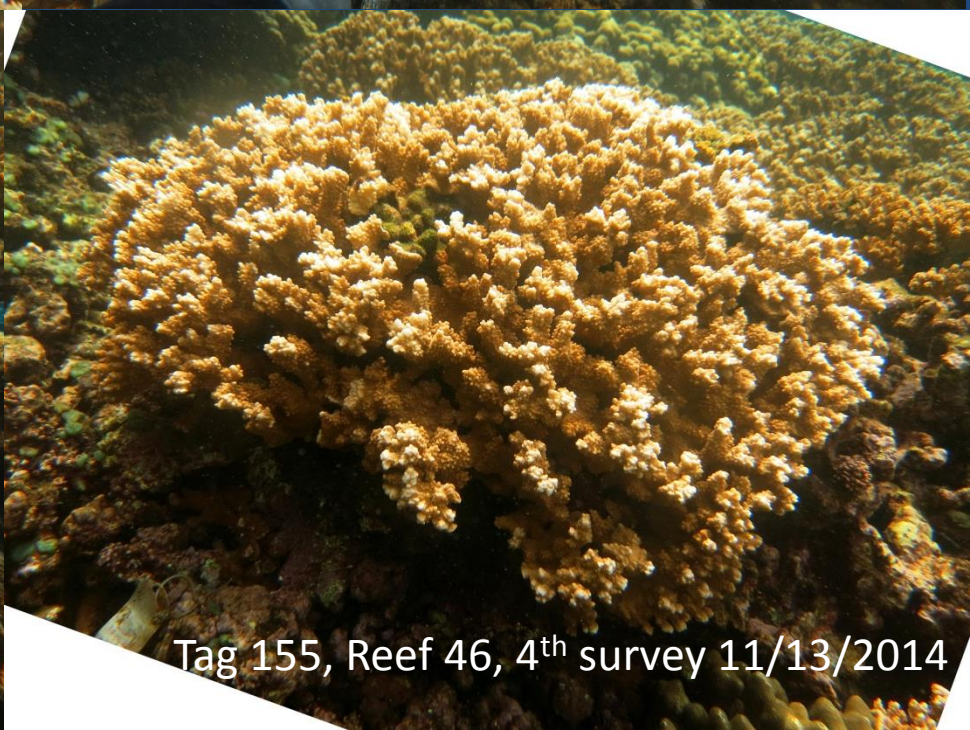
Tag 155, Reef 46, initial survey 10/6/2014



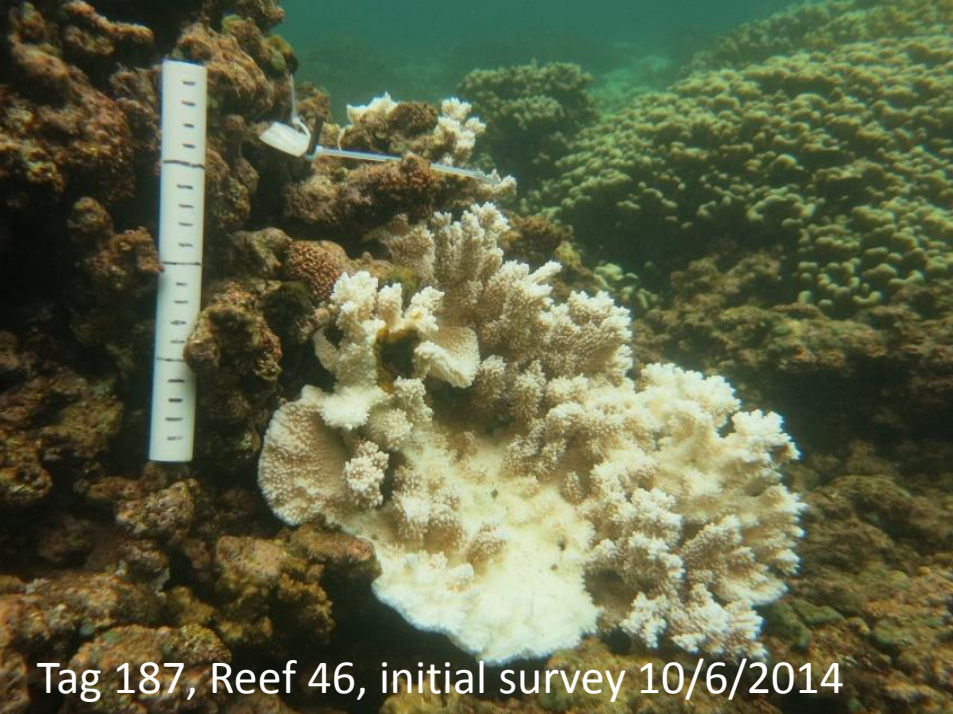
Tag 155, Reef 46, 2nd survey 10/13/2014



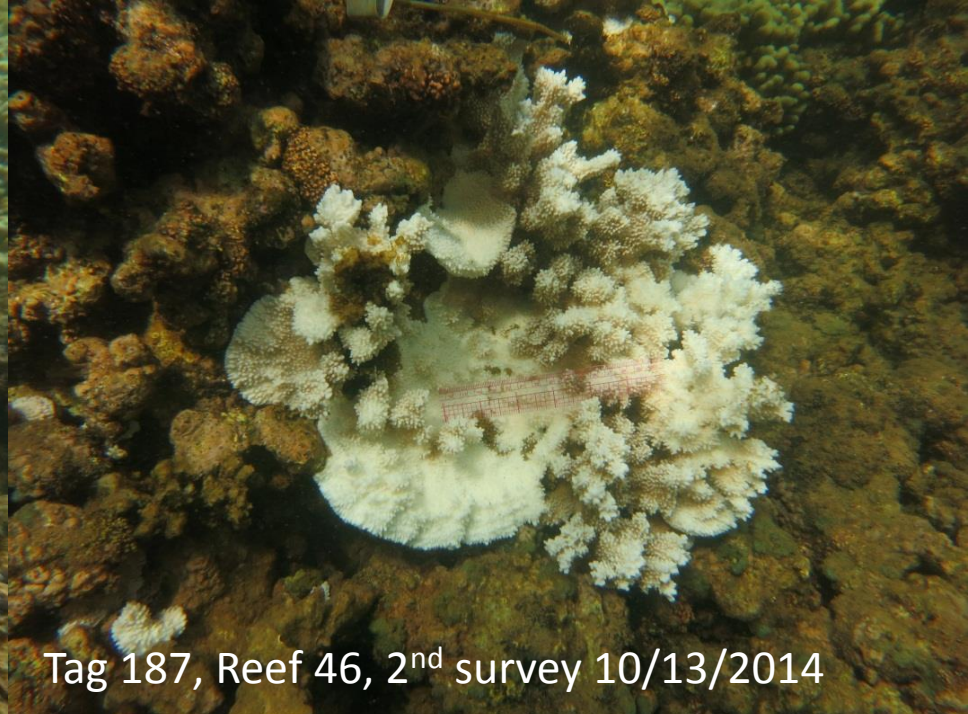
Tag 155, Reef 46, 3rd survey 10/23/2014



Tag 155, Reef 46, 4th survey 11/13/2014

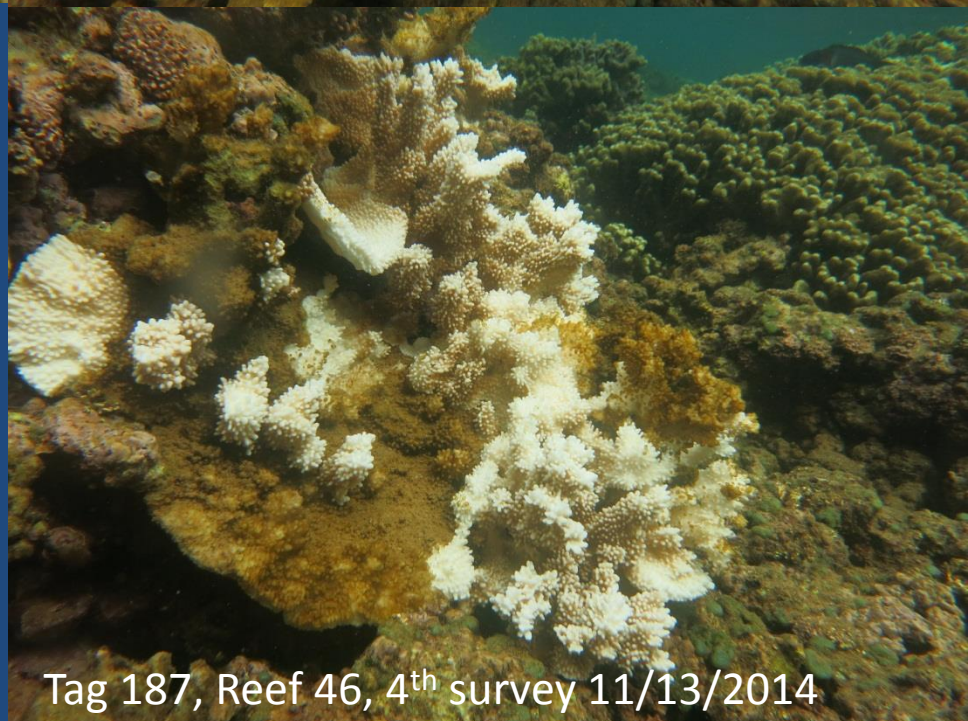


Tag 187, Reef 46, initial survey 10/6/2014



Tag 187, Reef 46, 2nd survey 10/13/2014

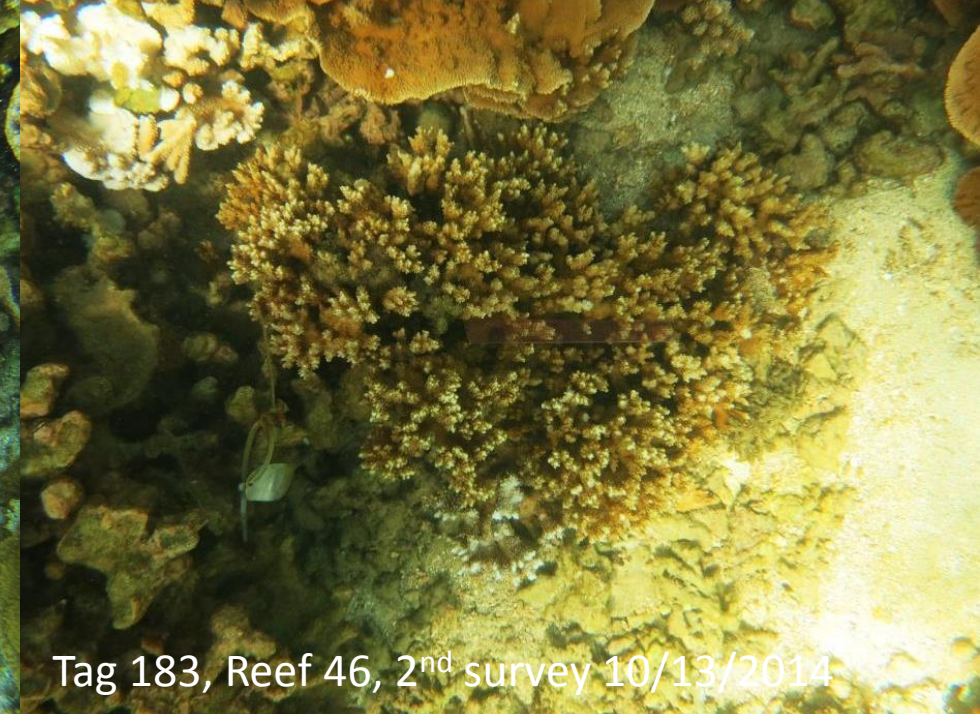
Tag 187, Reef 46, 3rd survey N/A



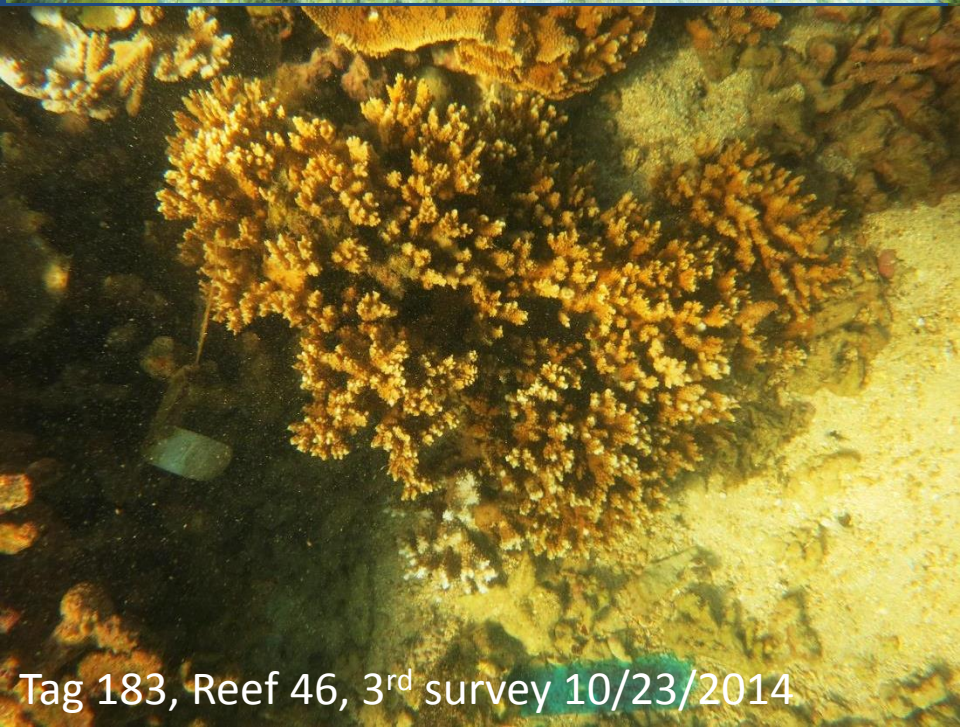
Tag 187, Reef 46, 4th survey 11/13/2014



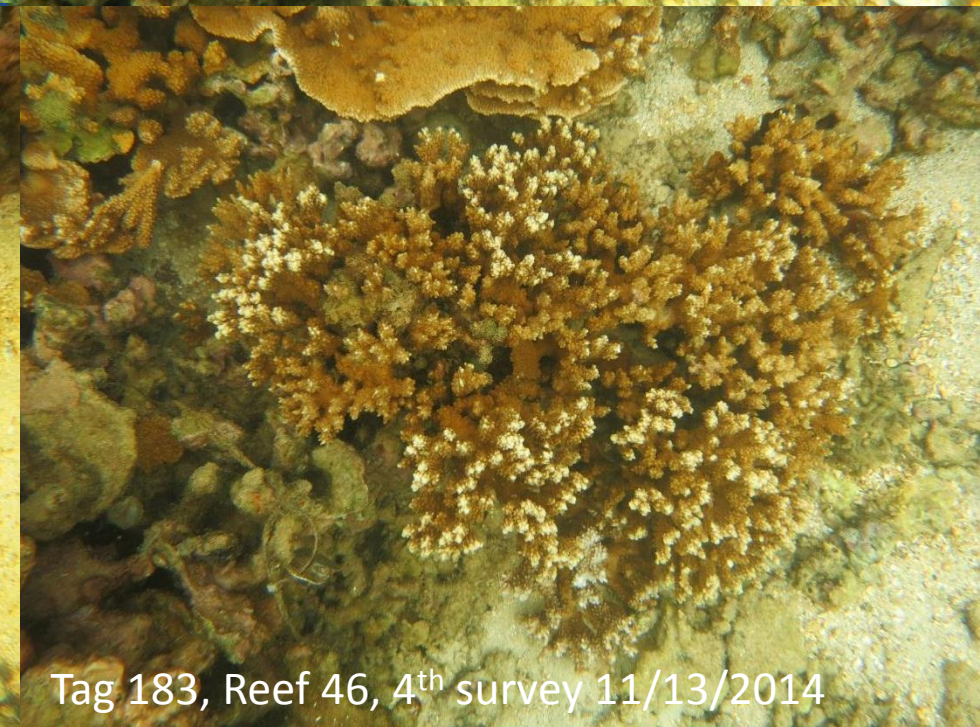
Tag 183, Reef 46, initial survey 10/6/2014



Tag 183, Reef 46, 2nd survey 10/13/2014



Tag 183, Reef 46, 3rd survey 10/23/2014



Tag 183, Reef 46, 4th survey 11/13/2014

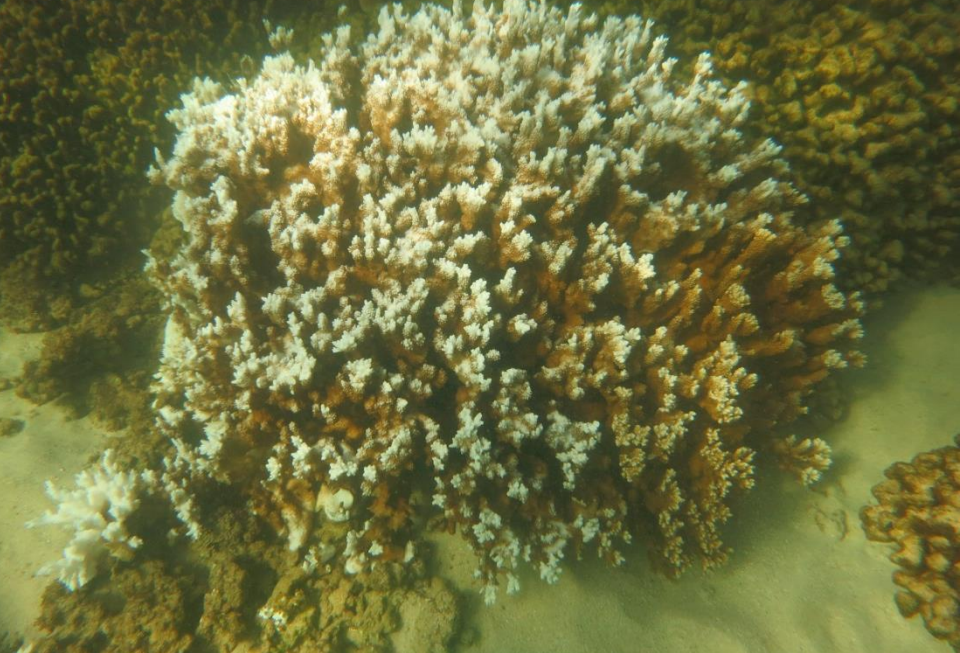
Tag 148, Reef 46, initial survey 10/6/2014



Tag 148, Reef 46, 2nd survey 10/13/2014



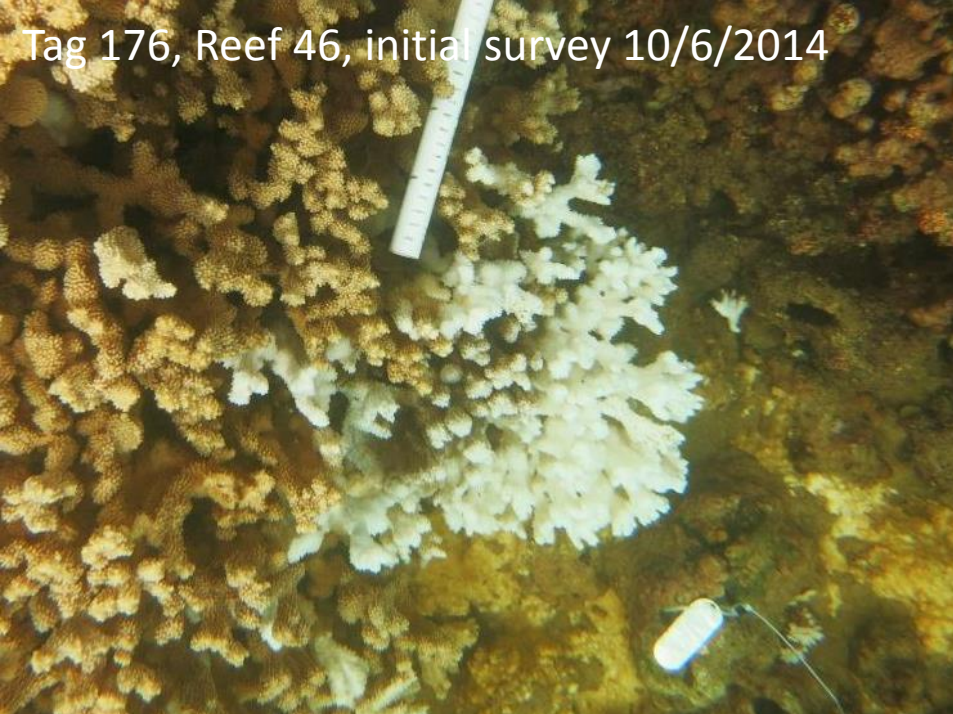
Tag 148, Reef 46, 3rd survey 10/23/2014



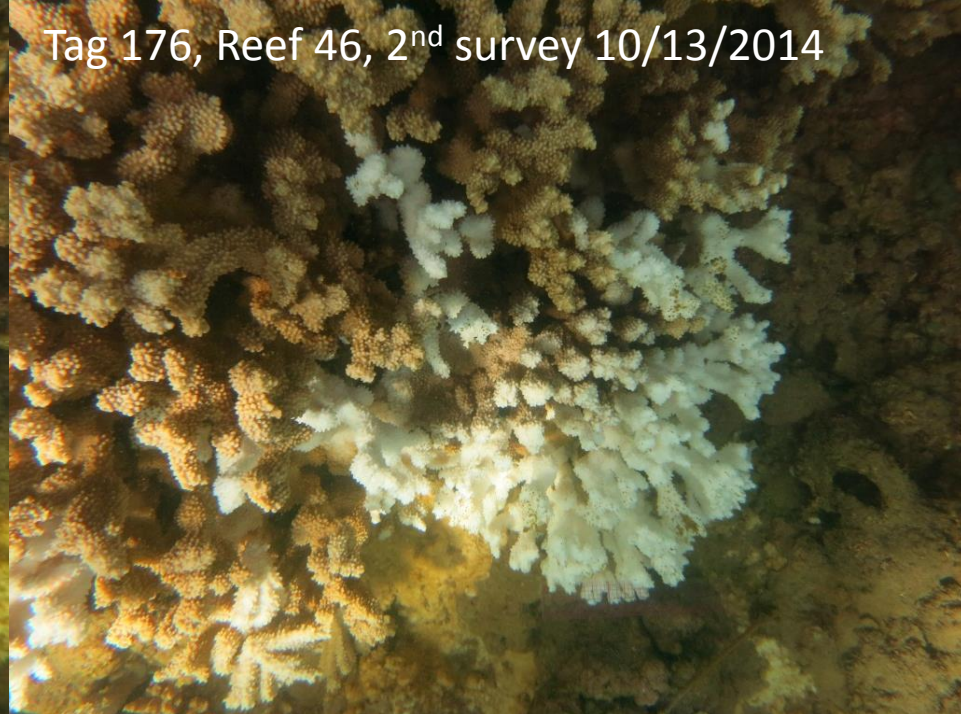
Tag 148, Reef 46, 4th survey 11/13/2014



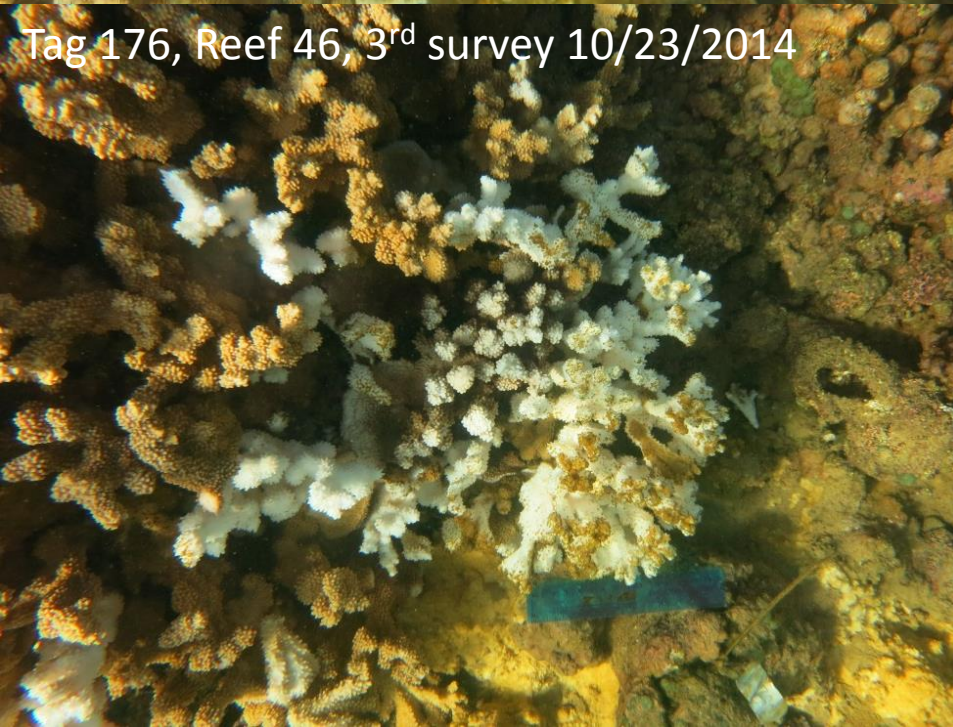
Tag 176, Reef 46, initial survey 10/6/2014



Tag 176, Reef 46, 2nd survey 10/13/2014



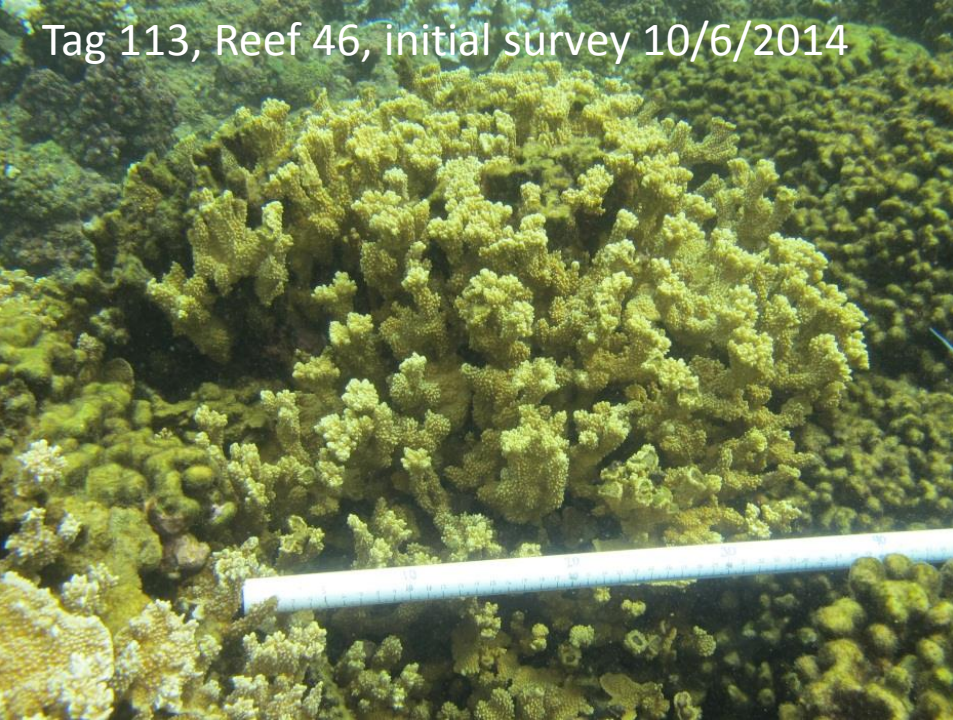
Tag 176, Reef 46, 3rd survey 10/23/2014



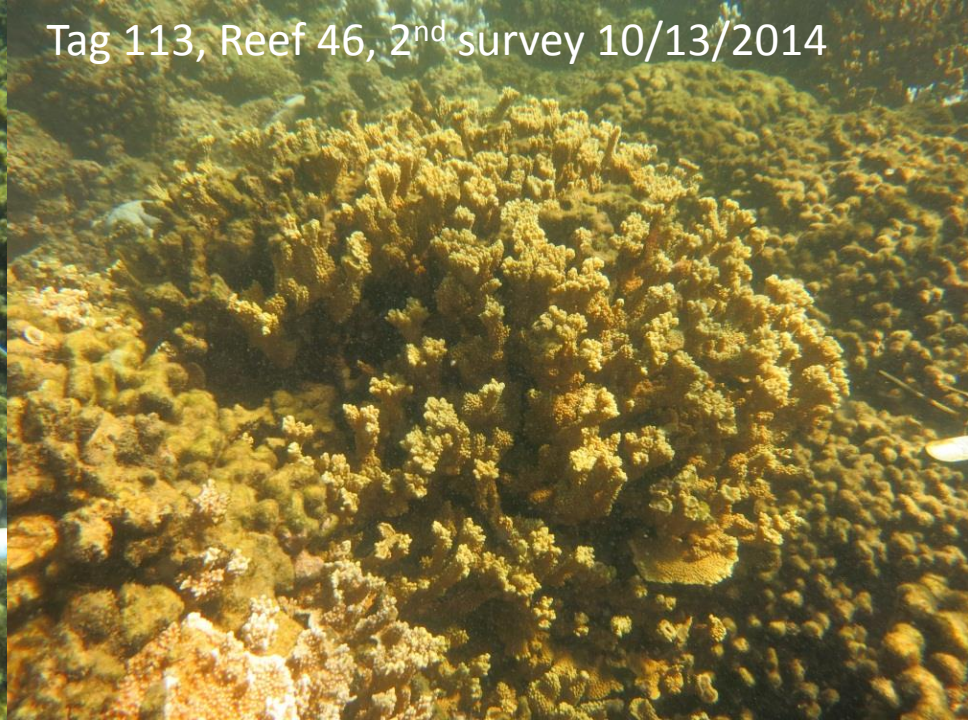
Tag 176, Reef 46, 4th survey 11/13/2014



Tag 113, Reef 46, initial survey 10/6/2014

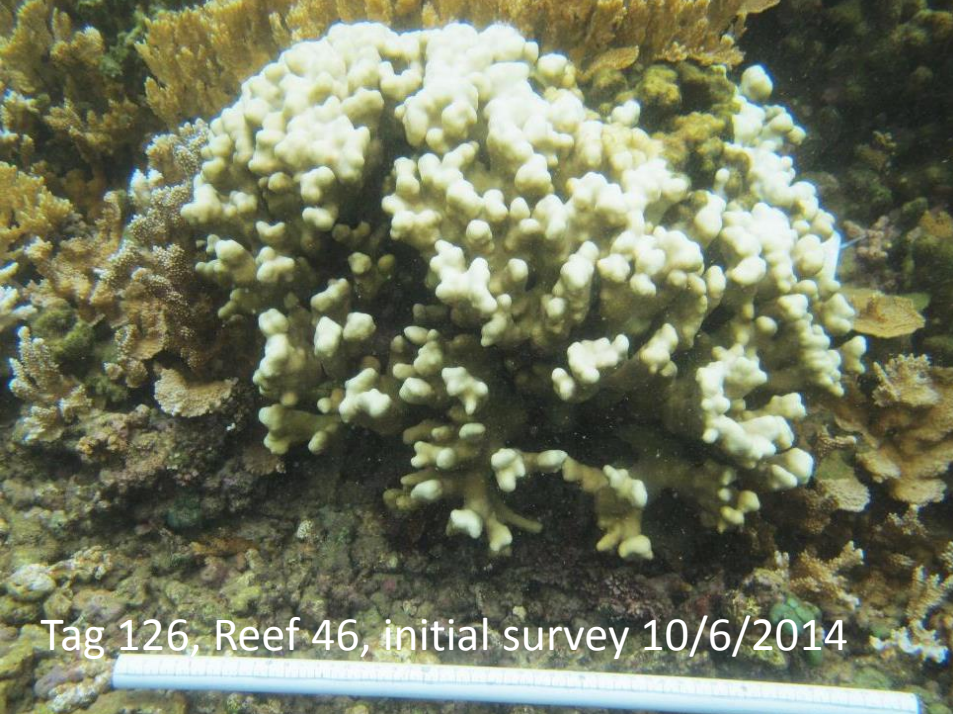


Tag 113, Reef 46, 2nd survey 10/13/2014

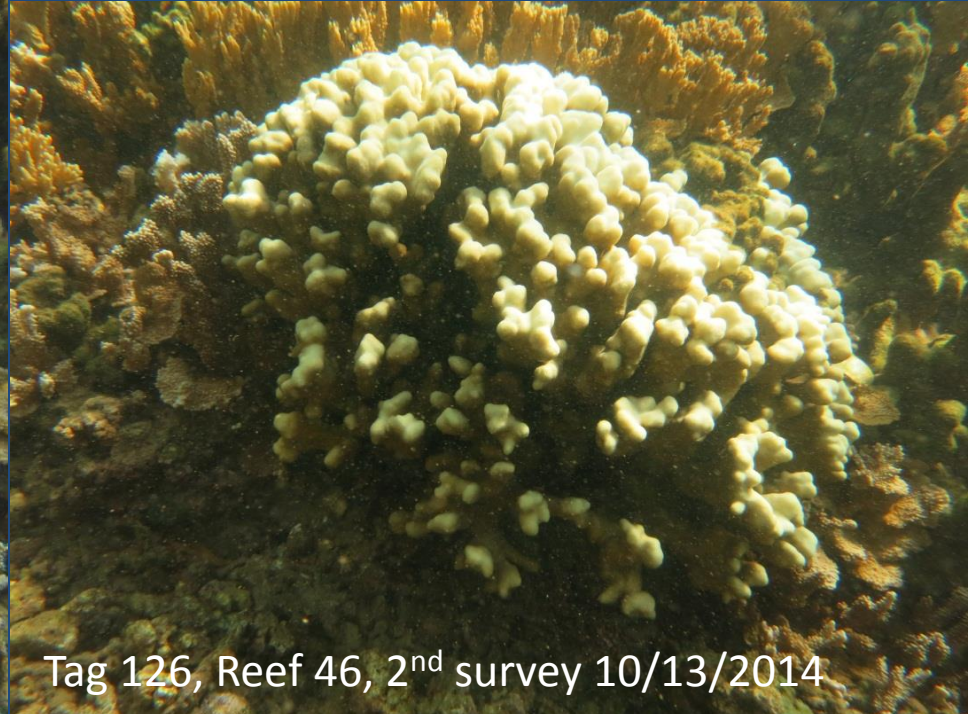


Tag 113, Reef 46, 3rd survey 10/23/2014

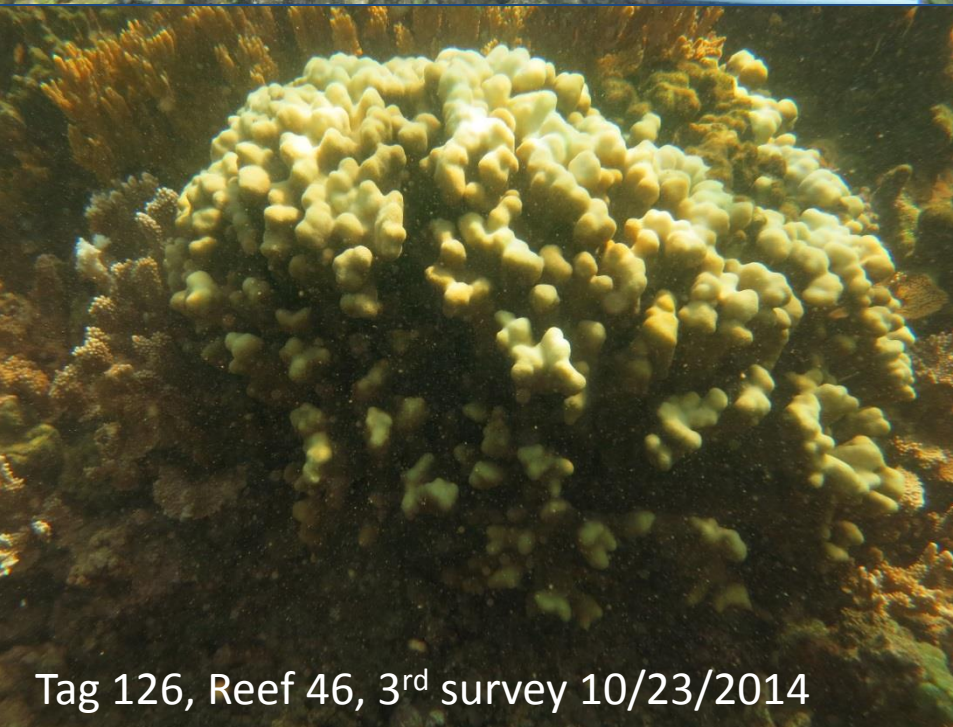
Tag 113, Reef 46, 4th survey N/A



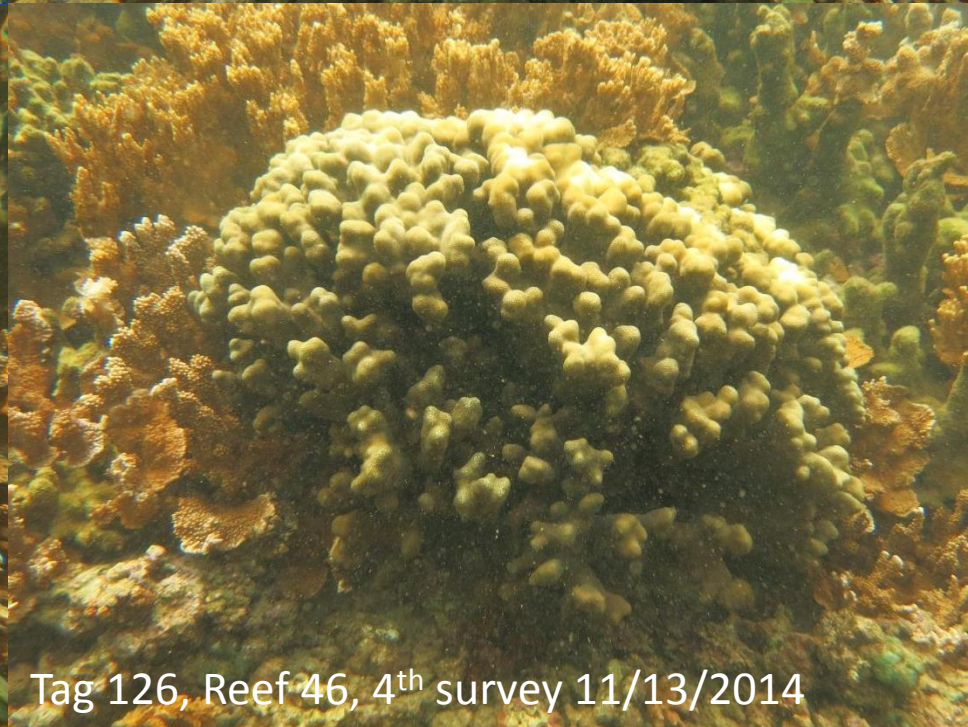
Tag 126, Reef 46, initial survey 10/6/2014



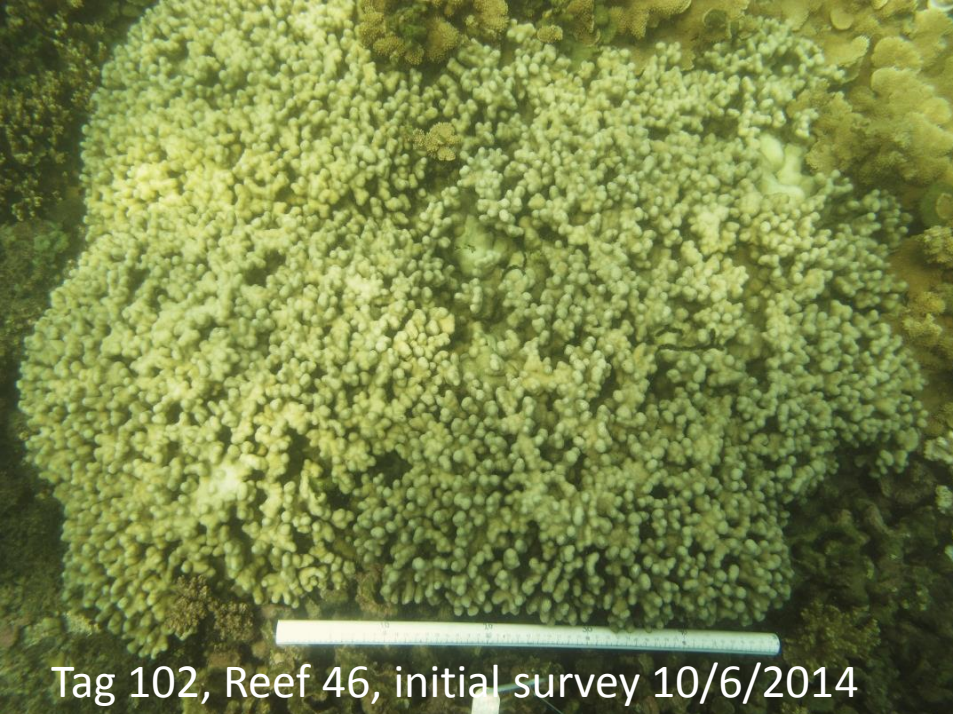
Tag 126, Reef 46, 2nd survey 10/13/2014



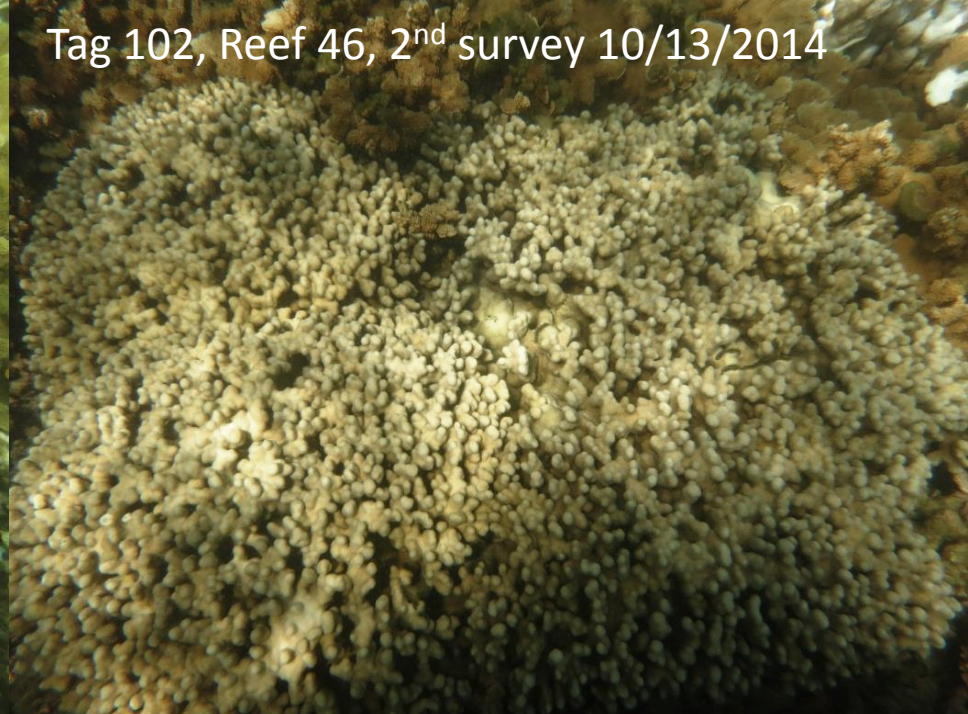
Tag 126, Reef 46, 3rd survey 10/23/2014



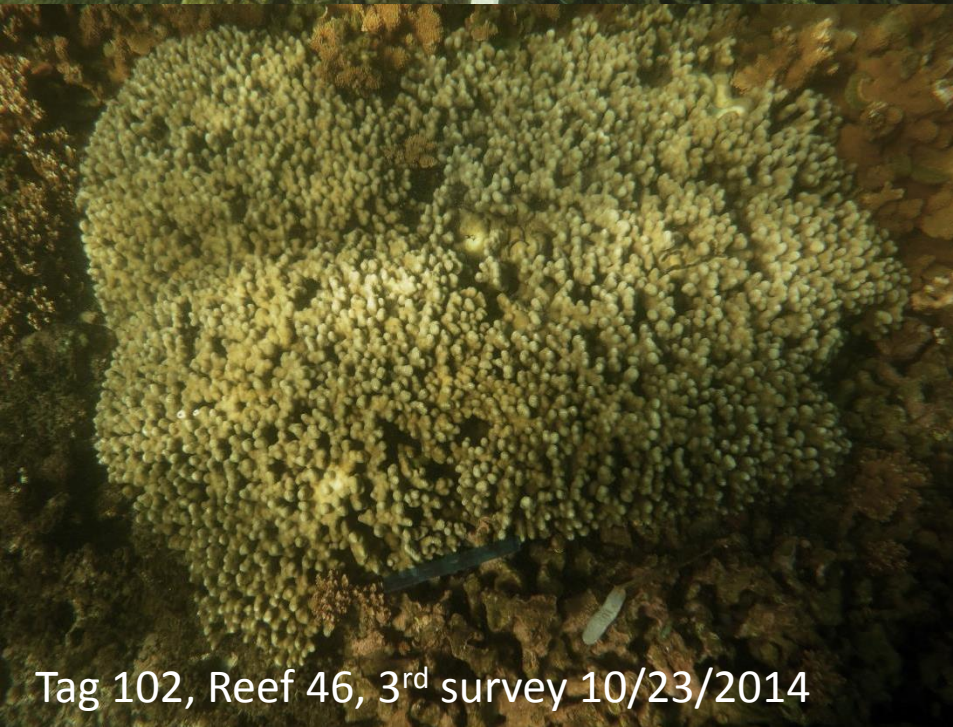
Tag 126, Reef 46, 4th survey 11/13/2014



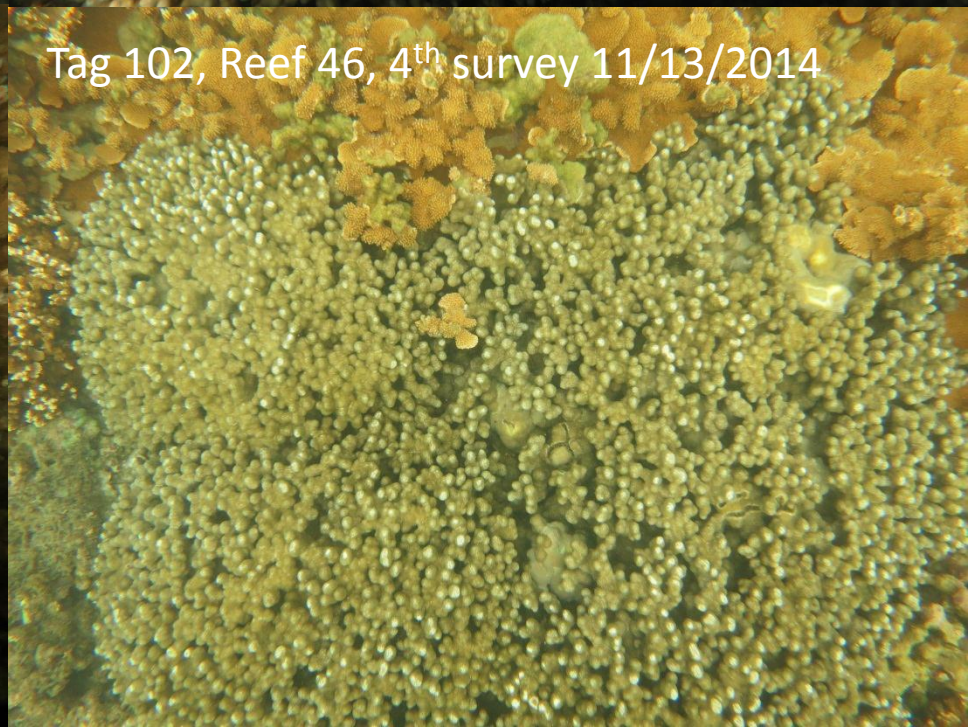
Tag 102, Reef 46, initial survey 10/6/2014



Tag 102, Reef 46, 2nd survey 10/13/2014

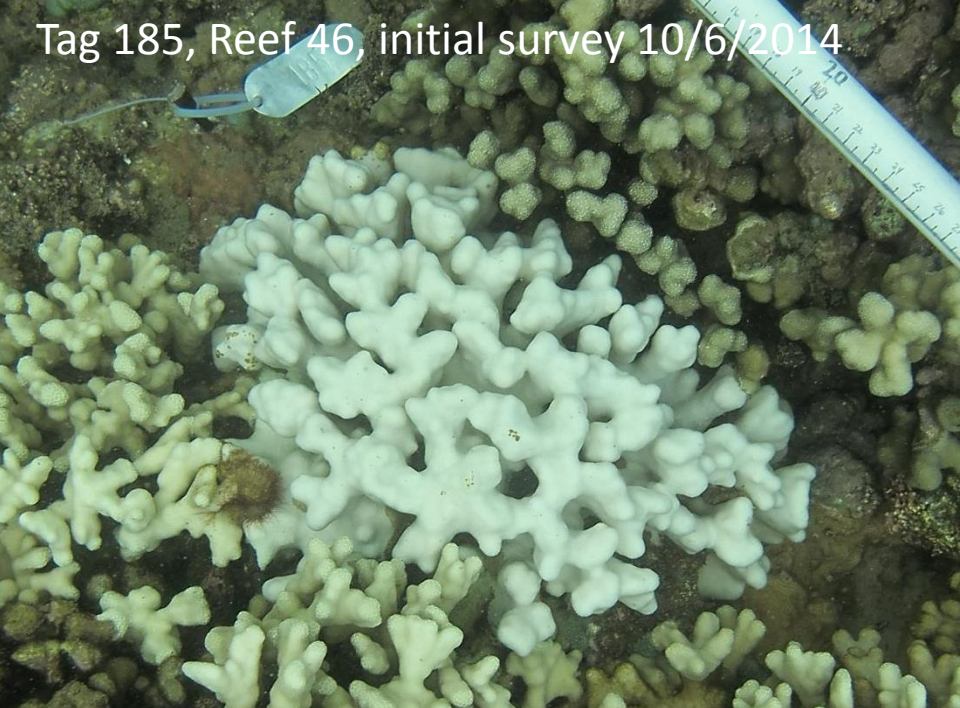


Tag 102, Reef 46, 3rd survey 10/23/2014

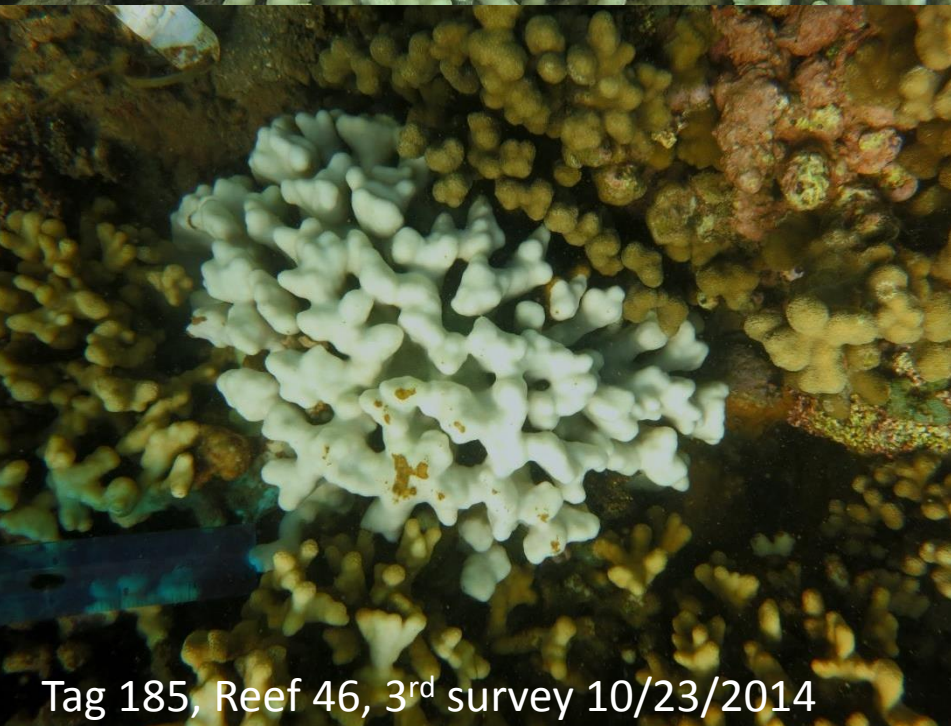
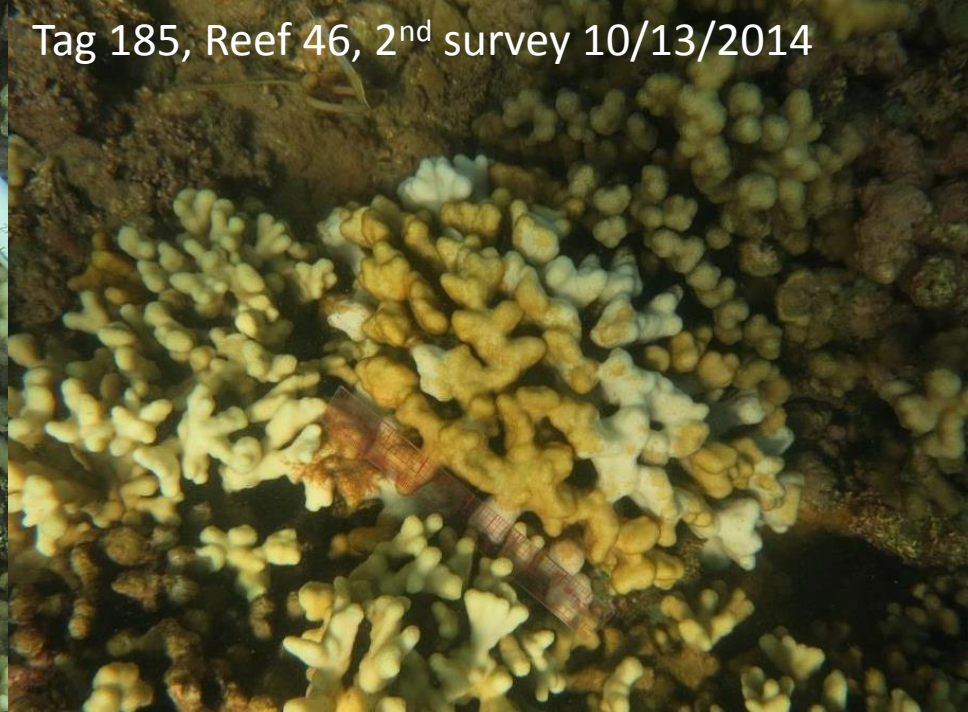


Tag 102, Reef 46, 4th survey 11/13/2014

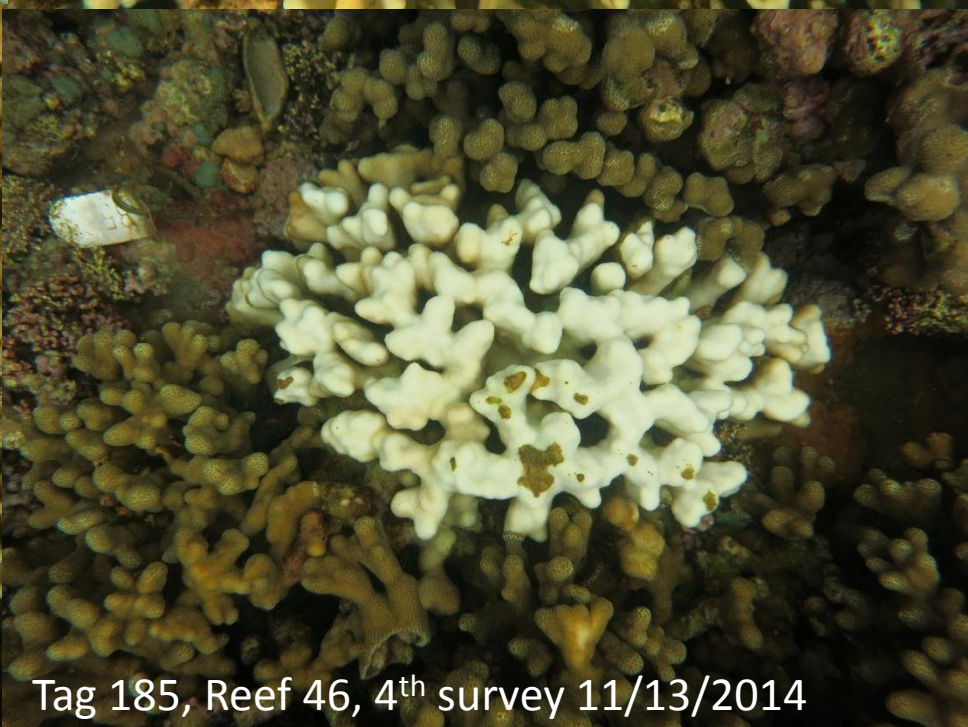
Tag 185, Reef 46, initial survey 10/6/2014



Tag 185, Reef 46, 2nd survey 10/13/2014



Tag 185, Reef 46, 3rd survey 10/23/2014



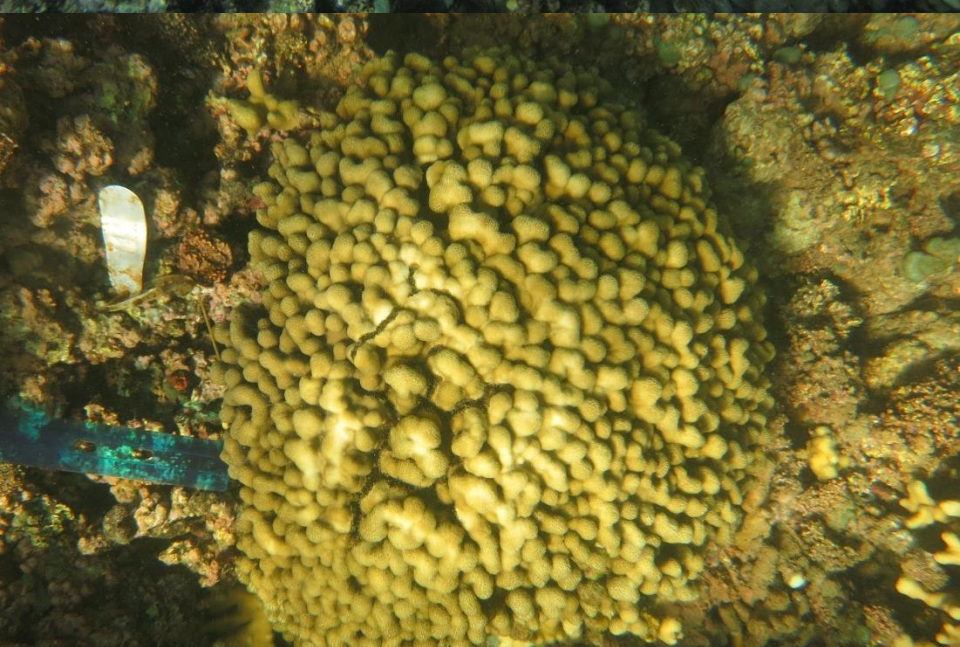
Tag 185, Reef 46, 4th survey 11/13/2014



Tag 111, Reef 46, initial survey 10/6/2014



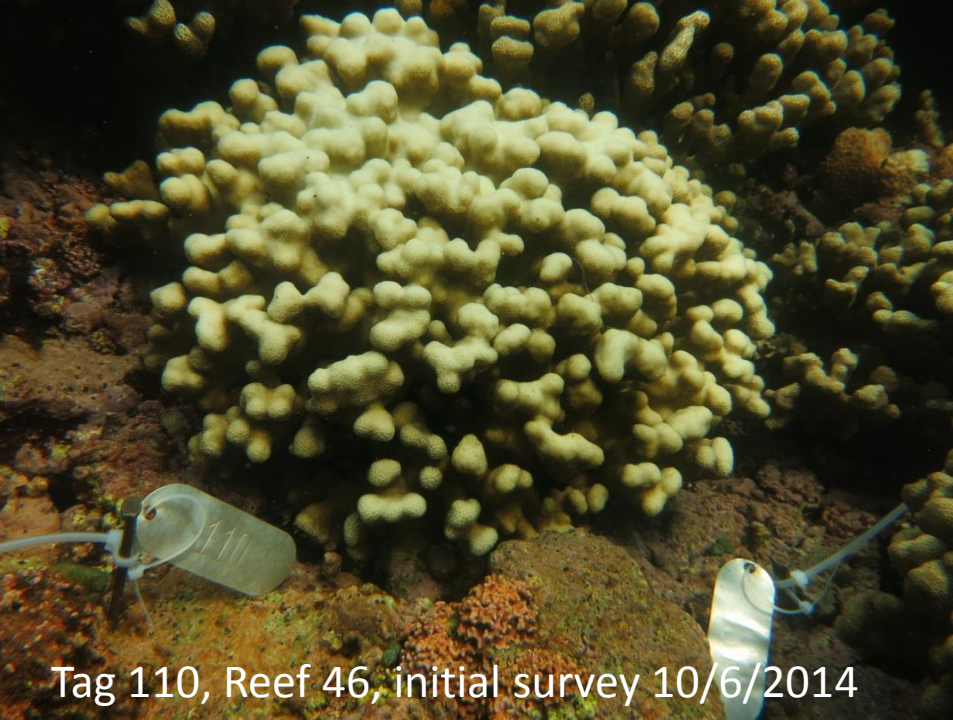
Tag 111, Reef 46, 2nd survey 10/13/2014



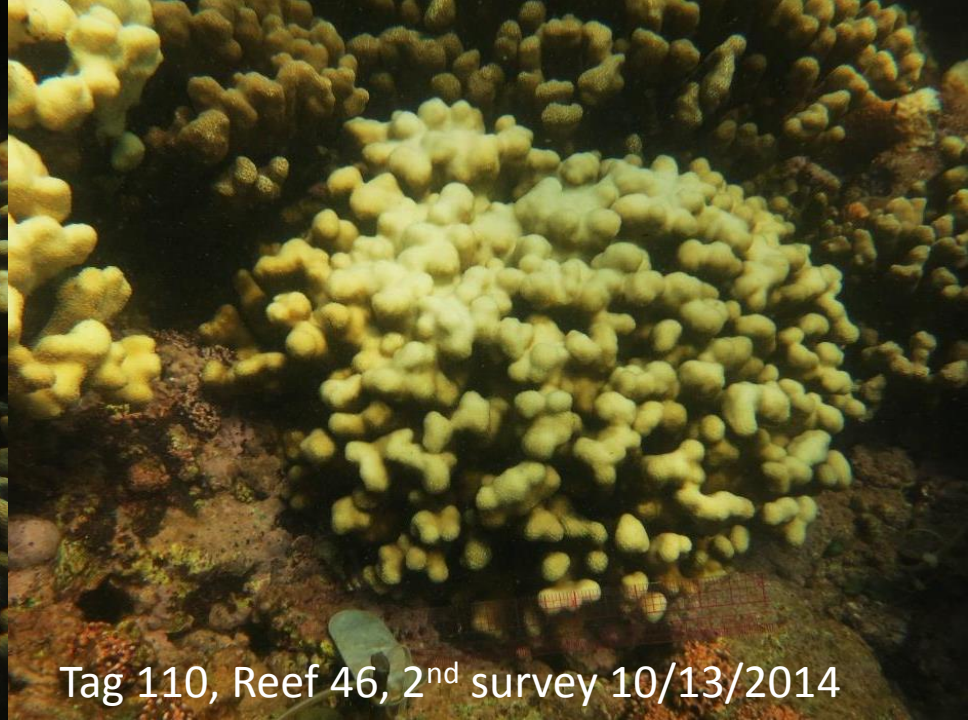
Tag 111, Reef 46, 3rd survey 10/23/2014



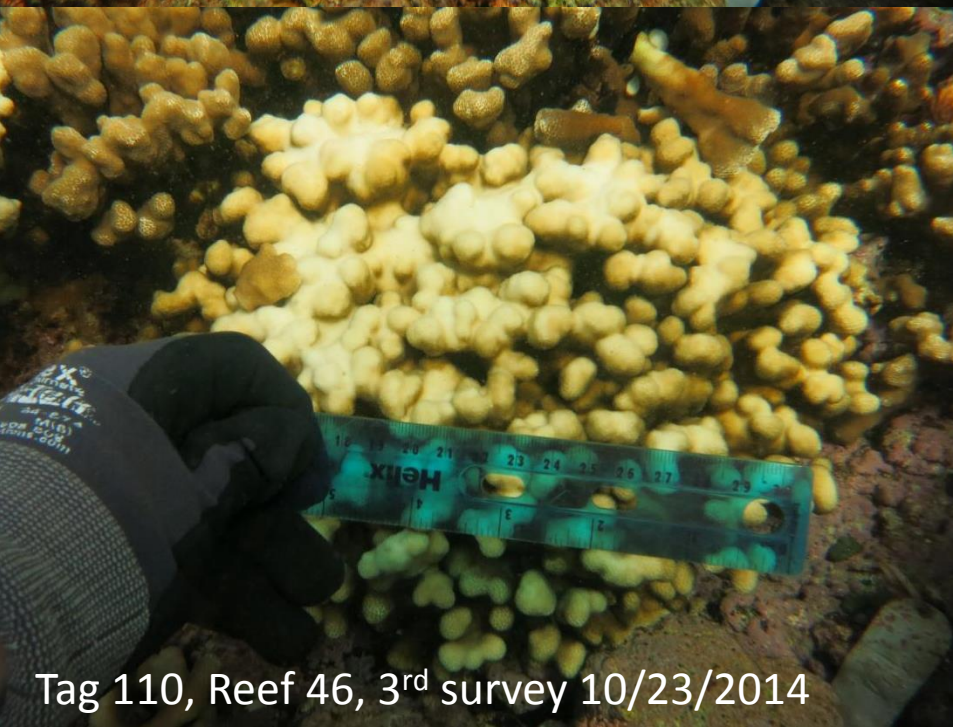
Tag 111, Reef 46, 4th survey 11/13/2014



Tag 110, Reef 46, initial survey 10/6/2014



Tag 110, Reef 46, 2nd survey 10/13/2014

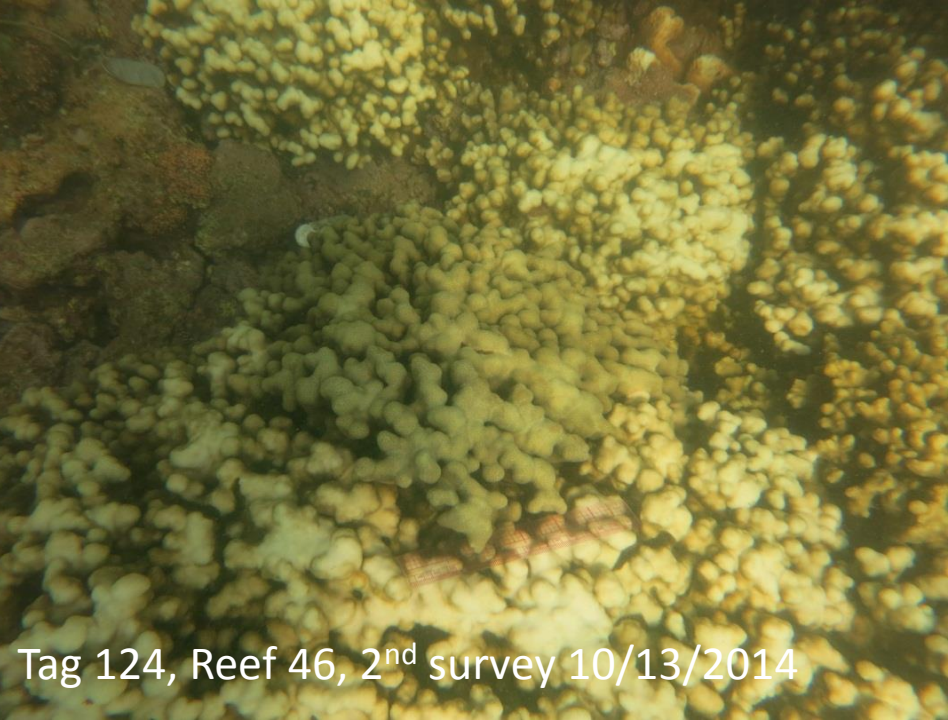
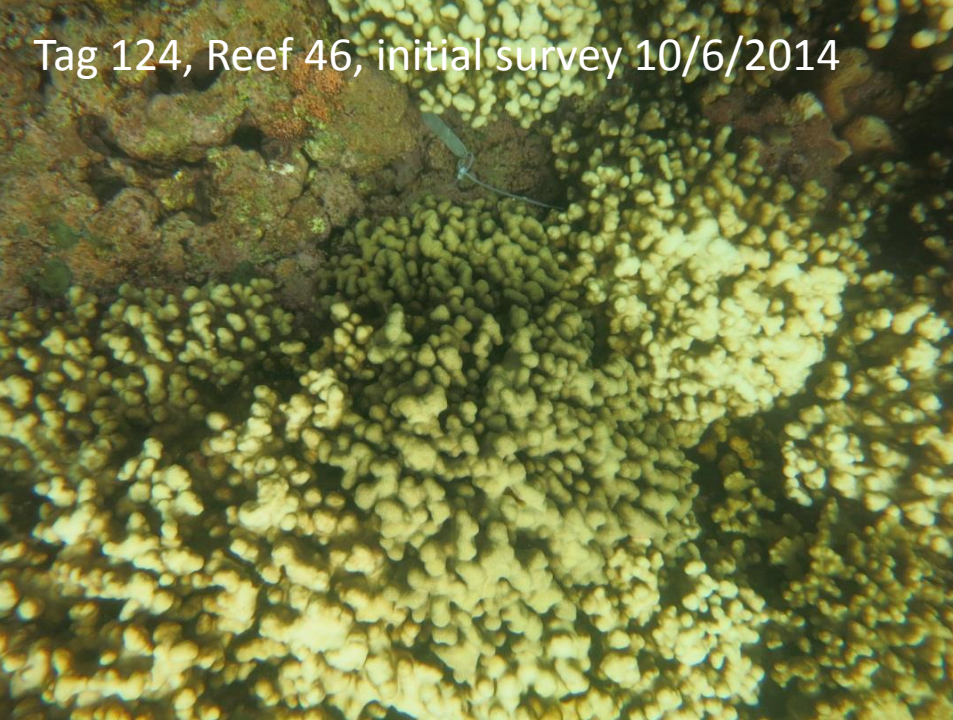


Tag 110, Reef 46, 3rd survey 10/23/2014

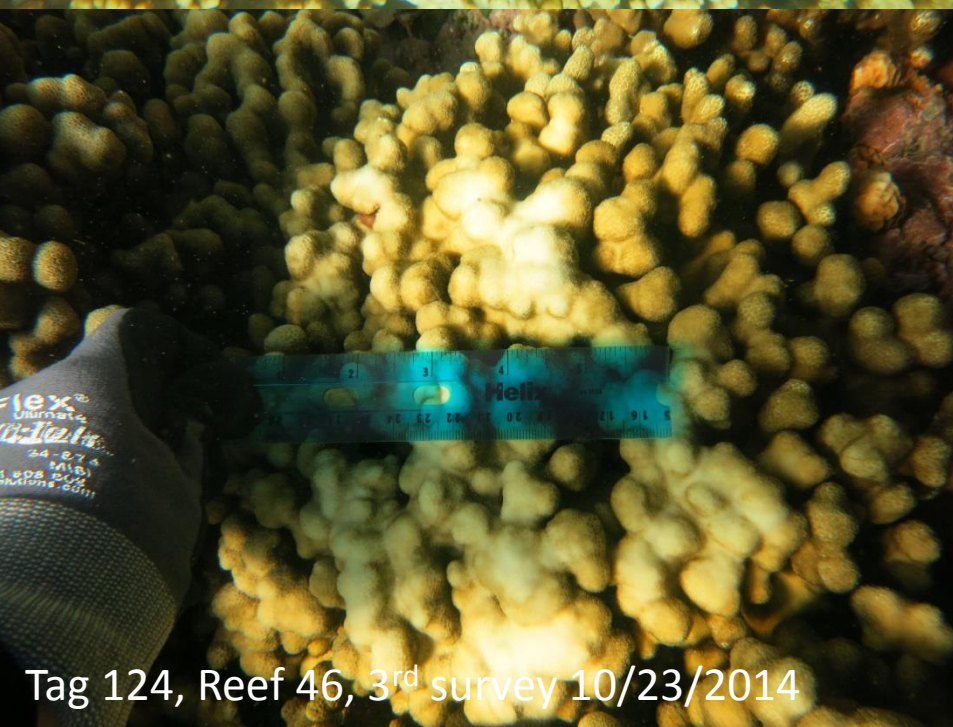


Tag 110, Reef 46, 4th survey 11/13/2014

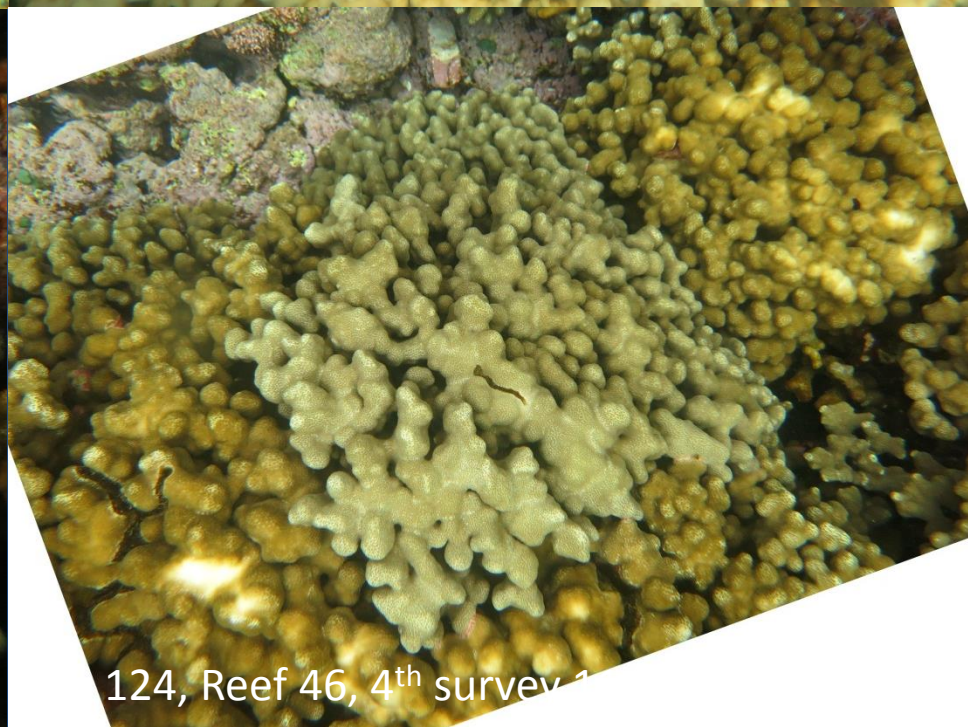
Tag 124, Reef 46, initial survey 10/6/2014



Tag 124, Reef 46, 2nd survey 10/13/2014

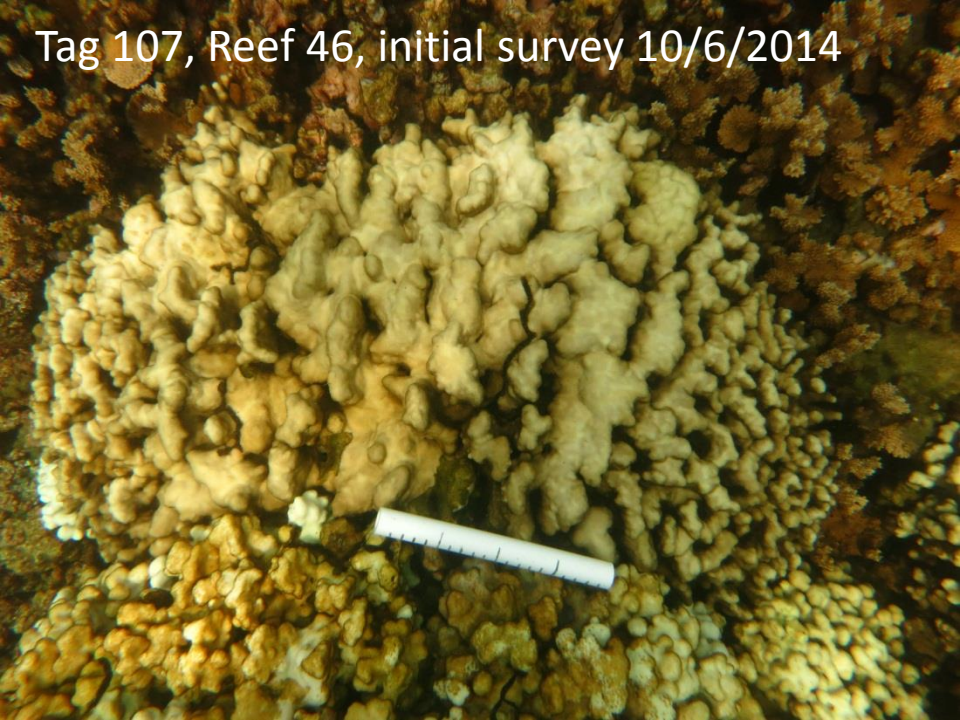


Tag 124, Reef 46, 3rd survey 10/23/2014

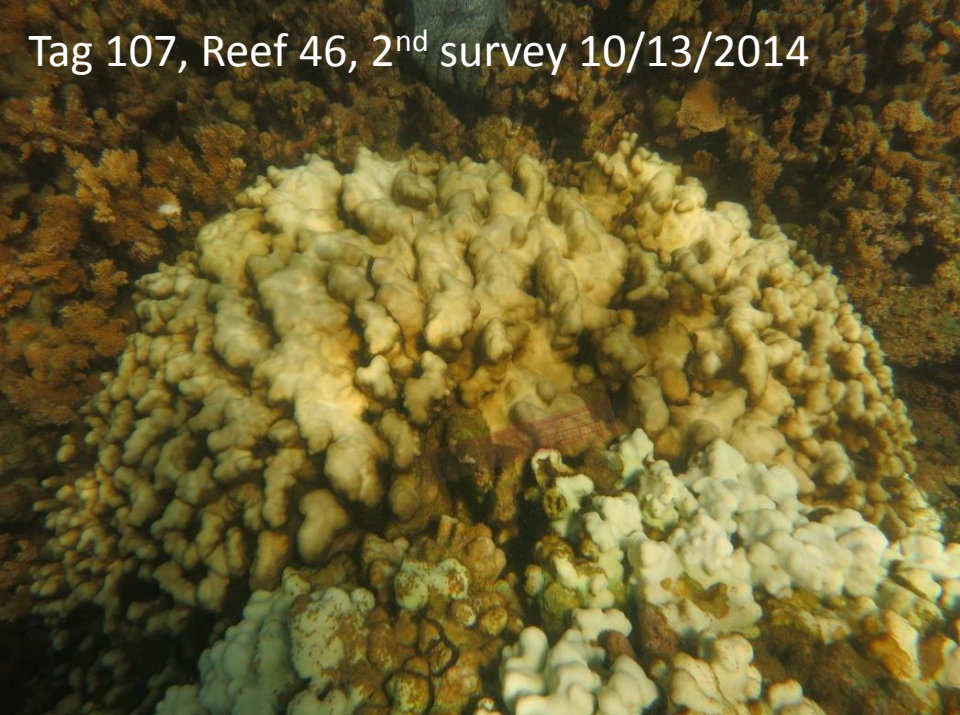


Tag 124, Reef 46, 4th survey 11/10/2014

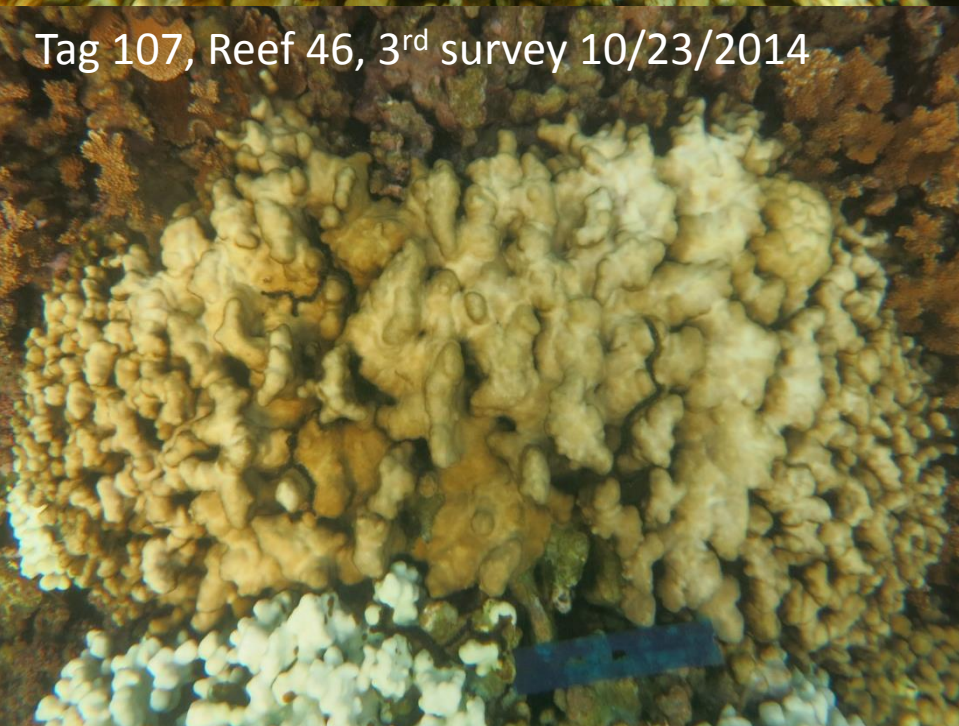
Tag 107, Reef 46, initial survey 10/6/2014



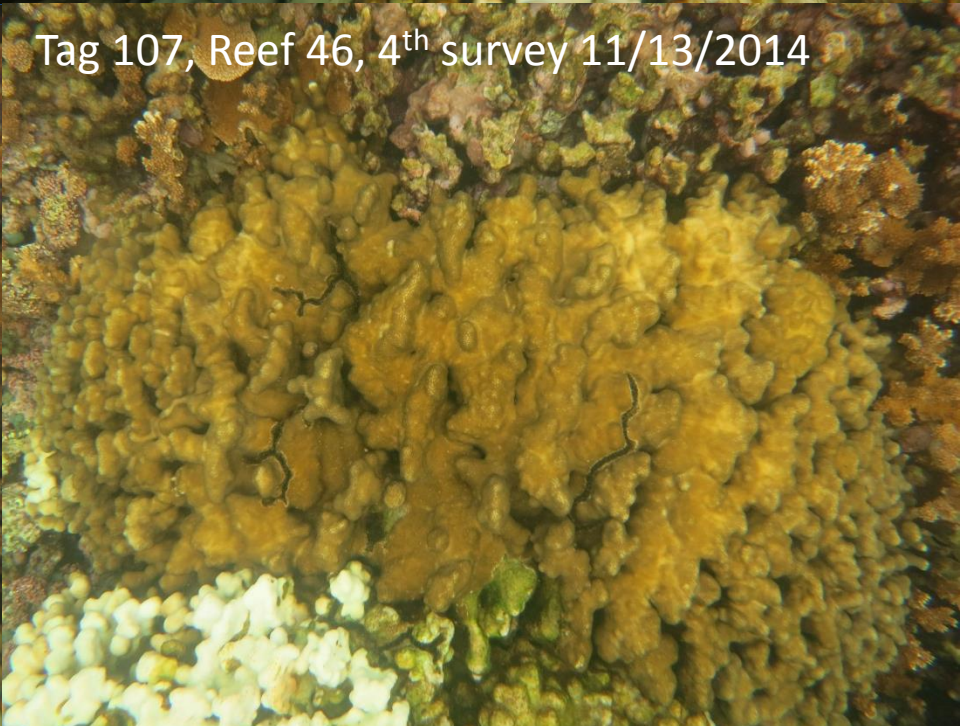
Tag 107, Reef 46, 2nd survey 10/13/2014

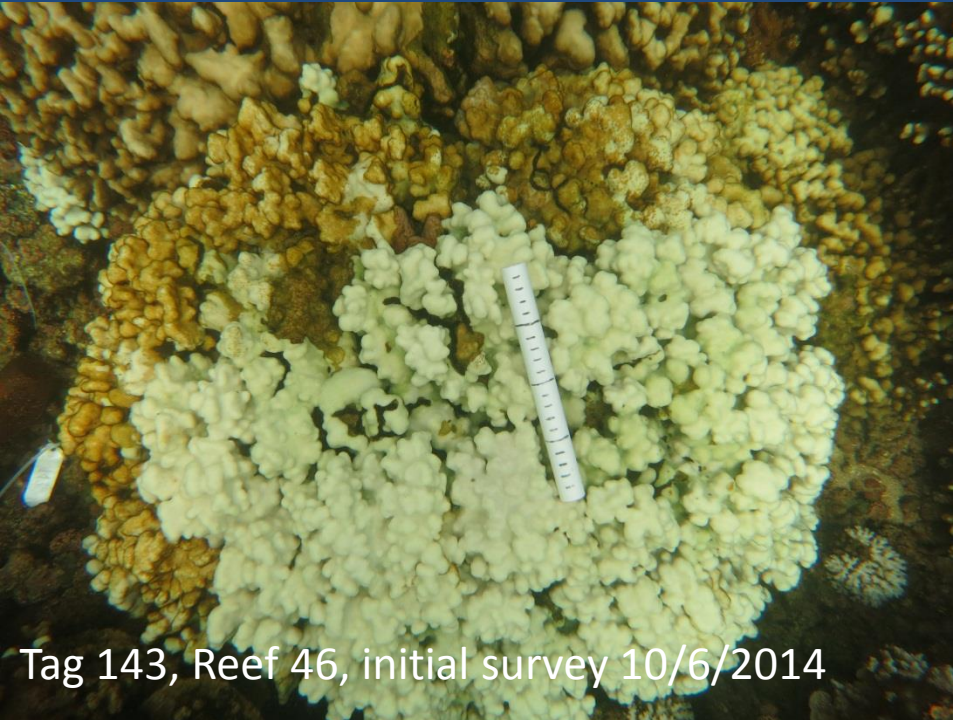


Tag 107, Reef 46, 3rd survey 10/23/2014

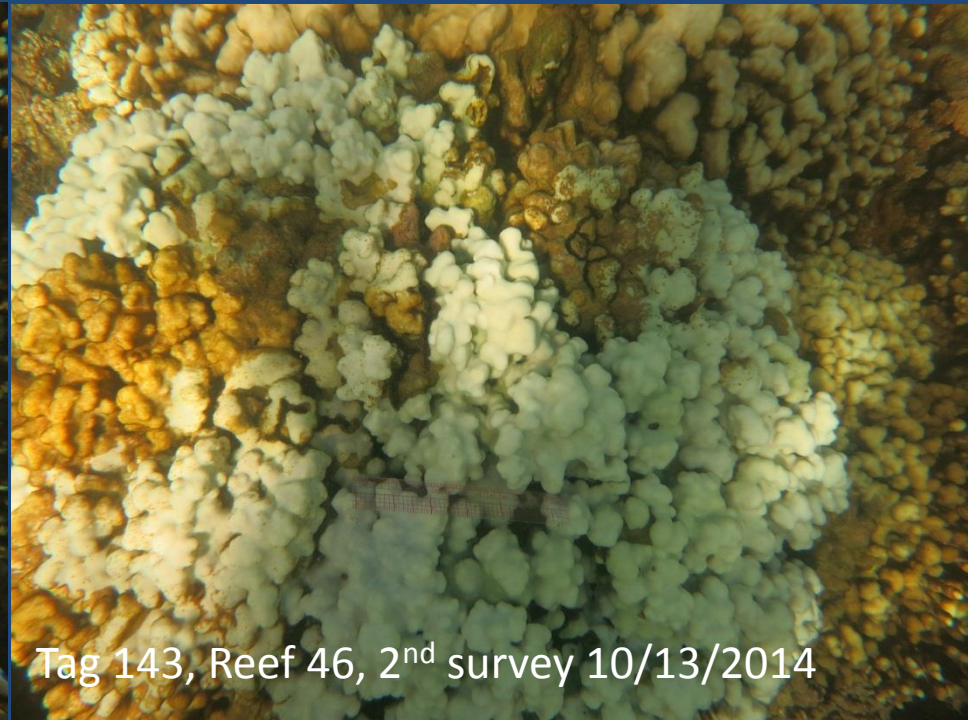


Tag 107, Reef 46, 4th survey 11/13/2014

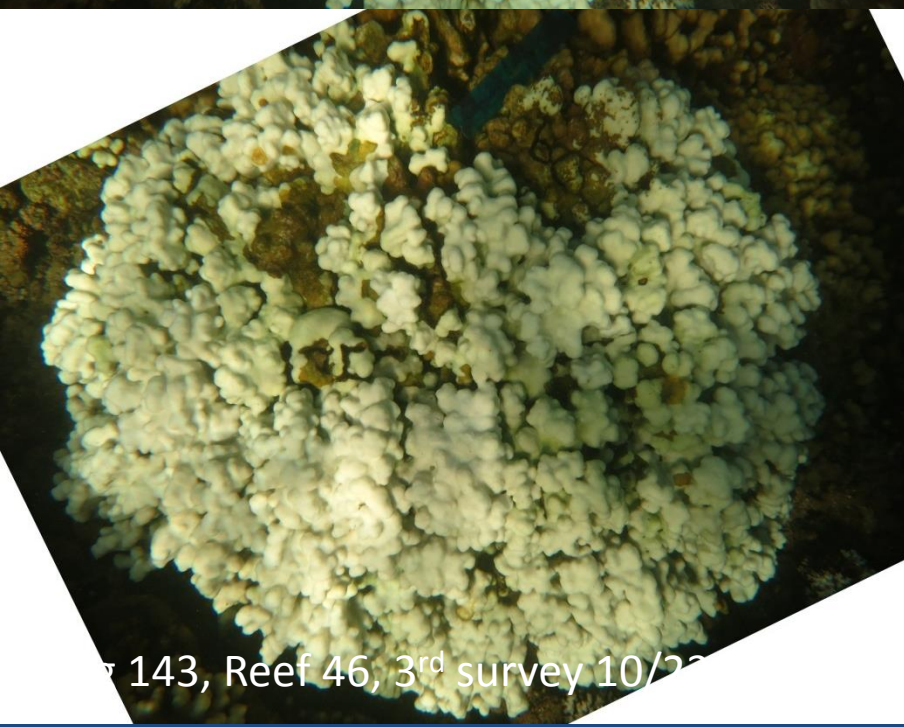




Tag 143, Reef 46, initial survey 10/6/2014



Tag 143, Reef 46, 2nd survey 10/13/2014



Tag 143, Reef 46, 3rd survey 10/23/2014



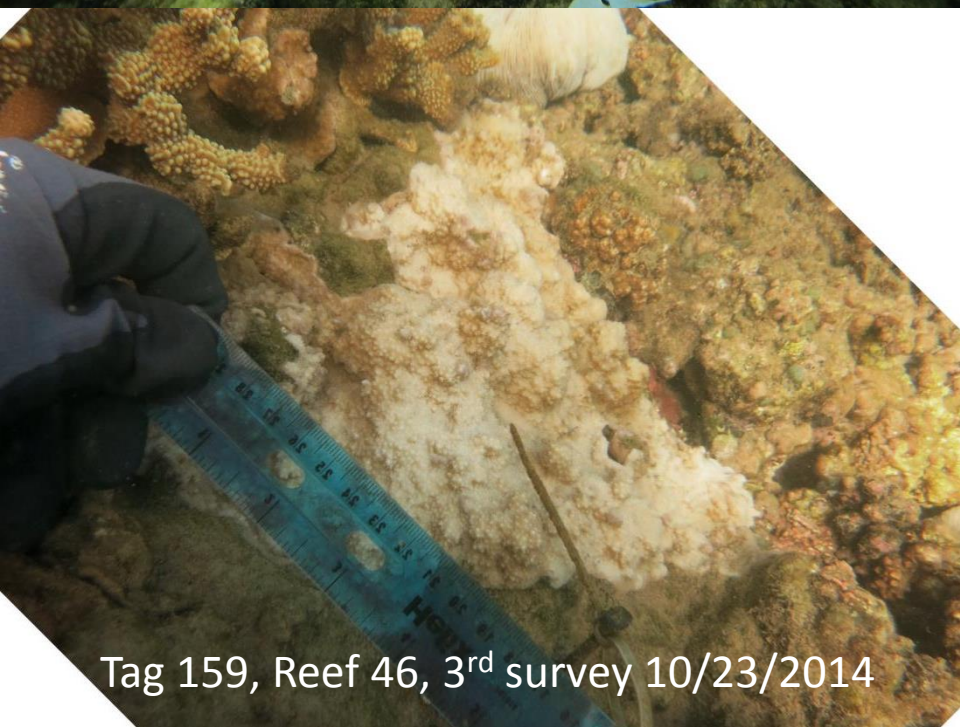
Tag 143, Reef 46, 4th survey 11/13/2014



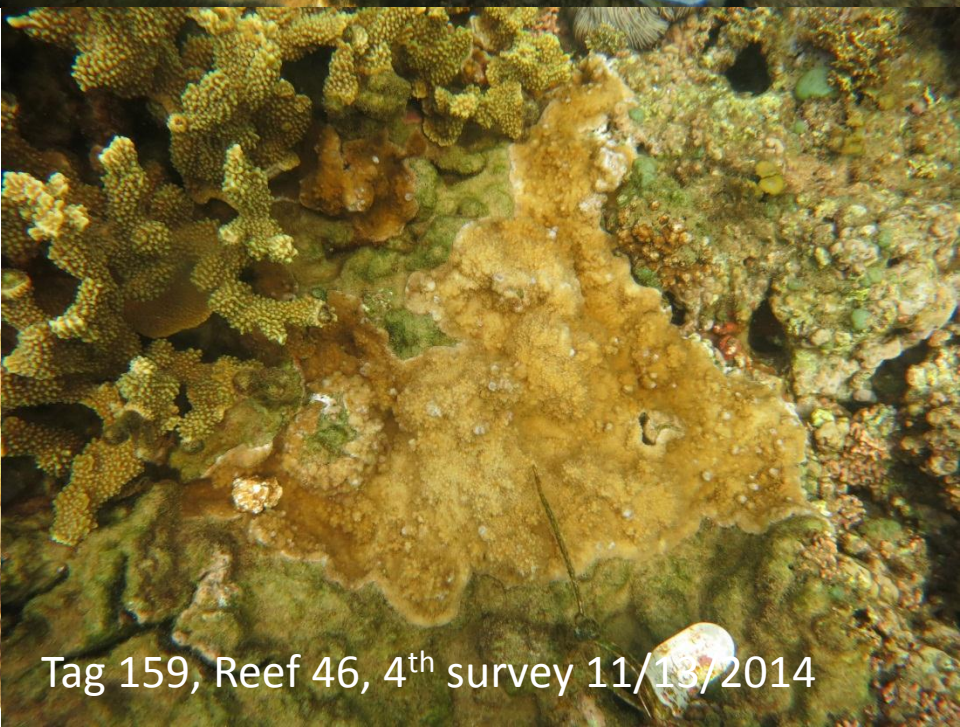
Tag 159, Reef 46, initial survey 10/6/2014



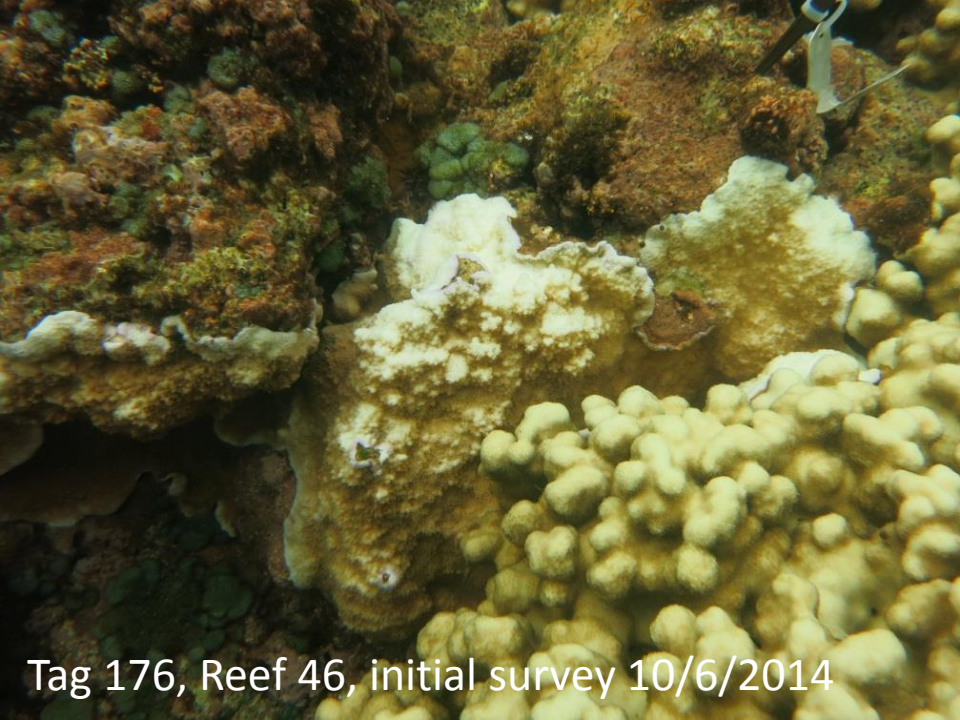
Tag 159, Reef 46, 2nd survey 10/13/2014



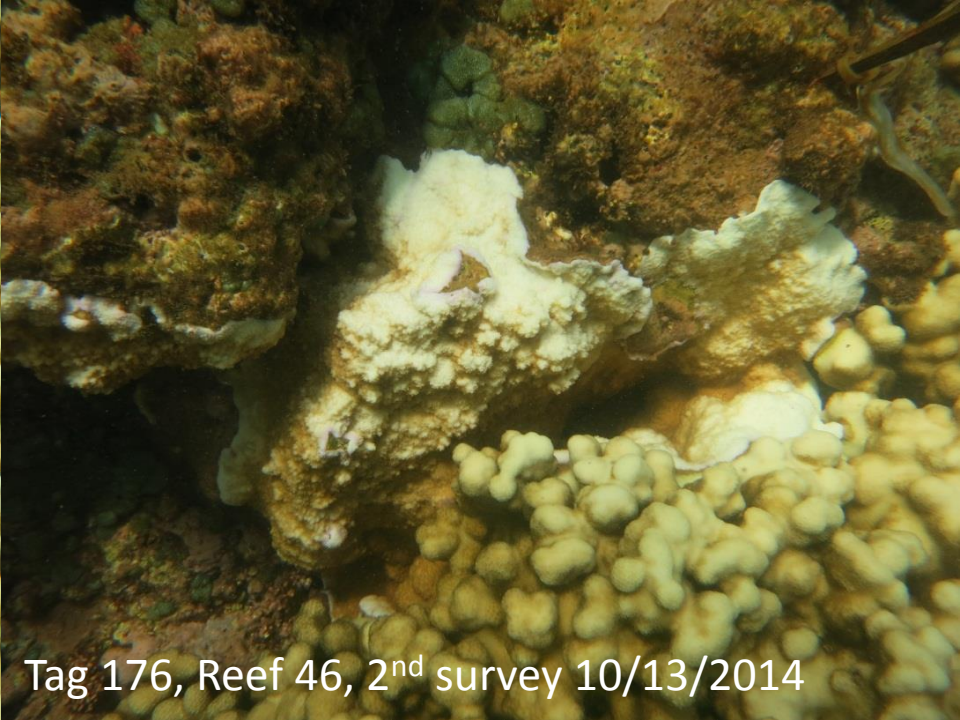
Tag 159, Reef 46, 3rd survey 10/23/2014



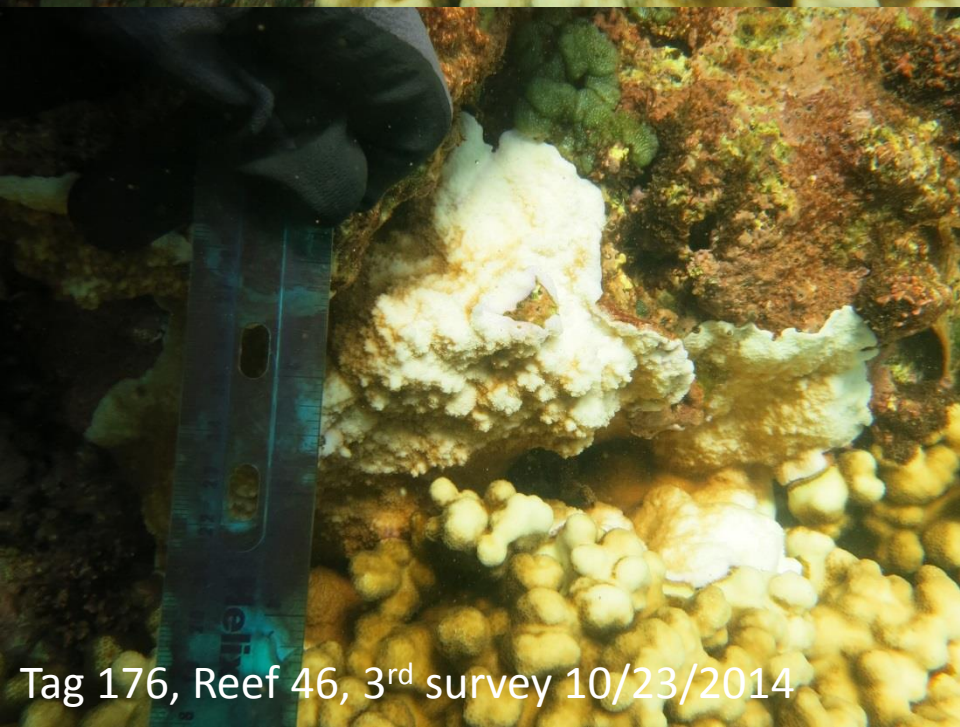
Tag 159, Reef 46, 4th survey 11/13/2014



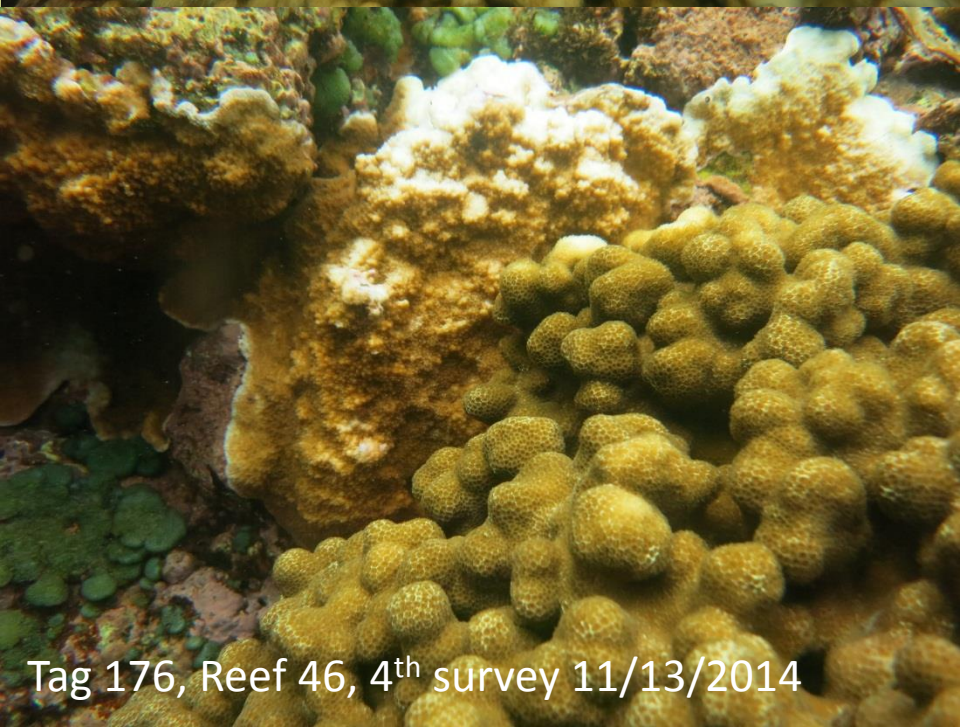
Tag 176, Reef 46, initial survey 10/6/2014



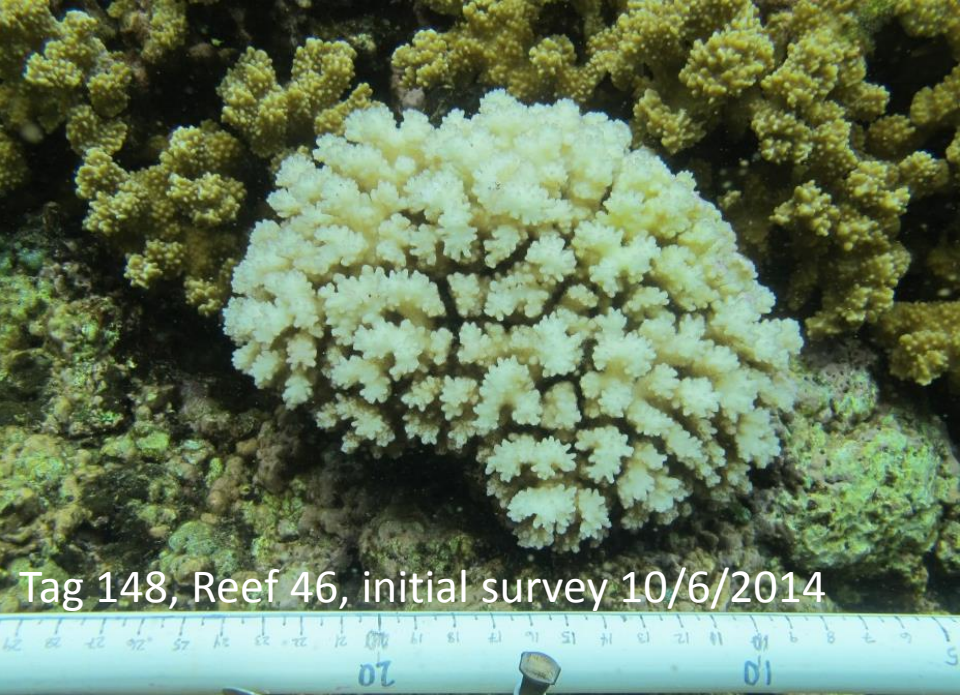
Tag 176, Reef 46, 2nd survey 10/13/2014



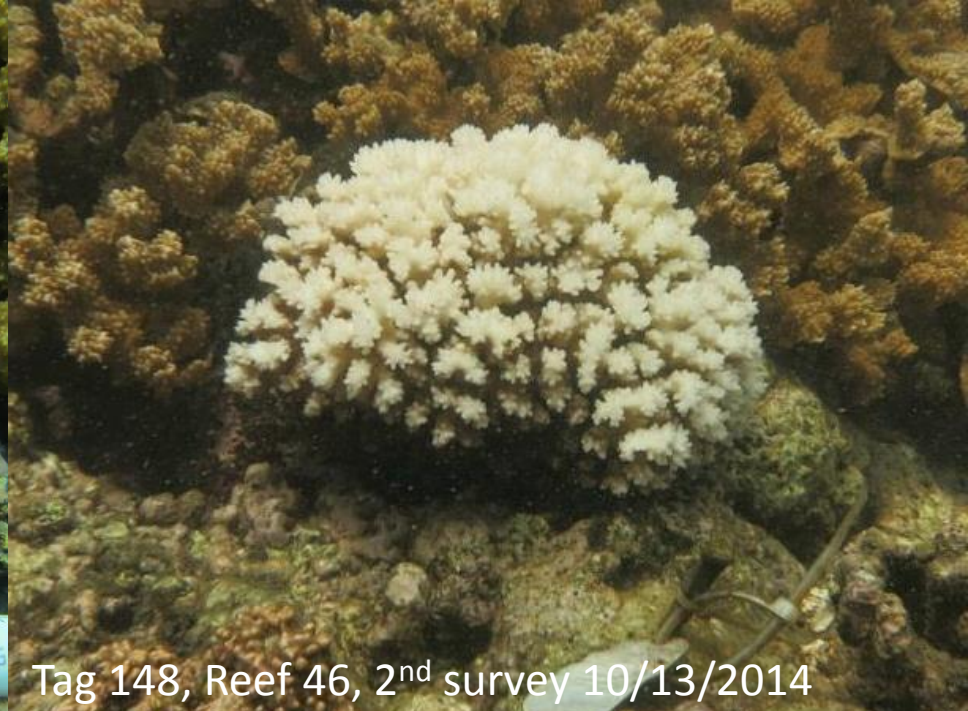
Tag 176, Reef 46, 3rd survey 10/23/2014



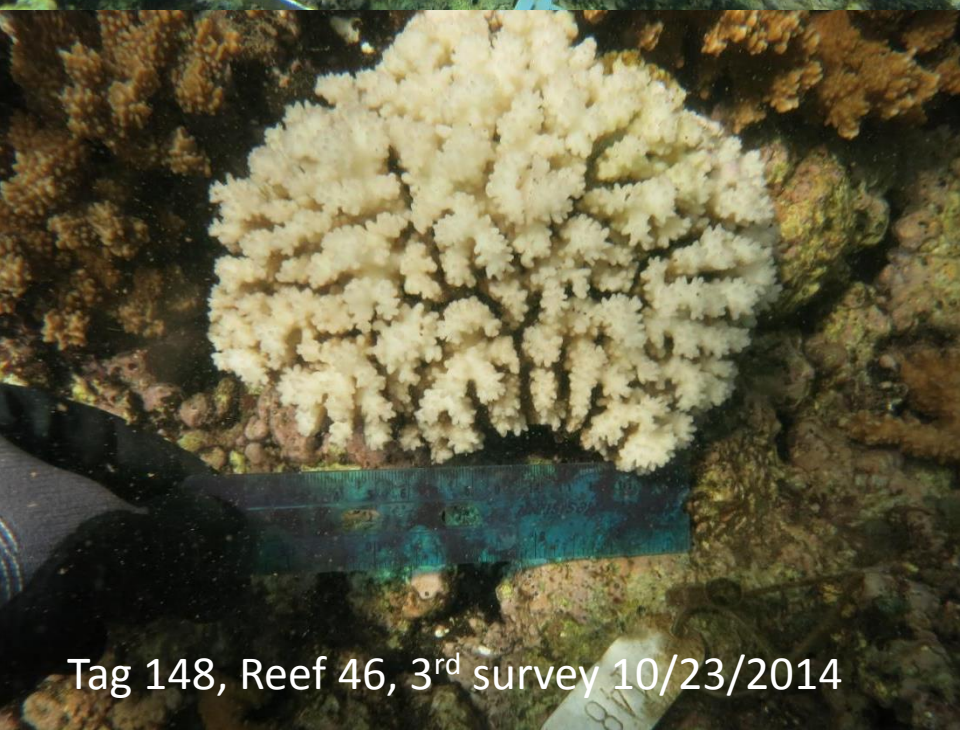
Tag 176, Reef 46, 4th survey 11/13/2014



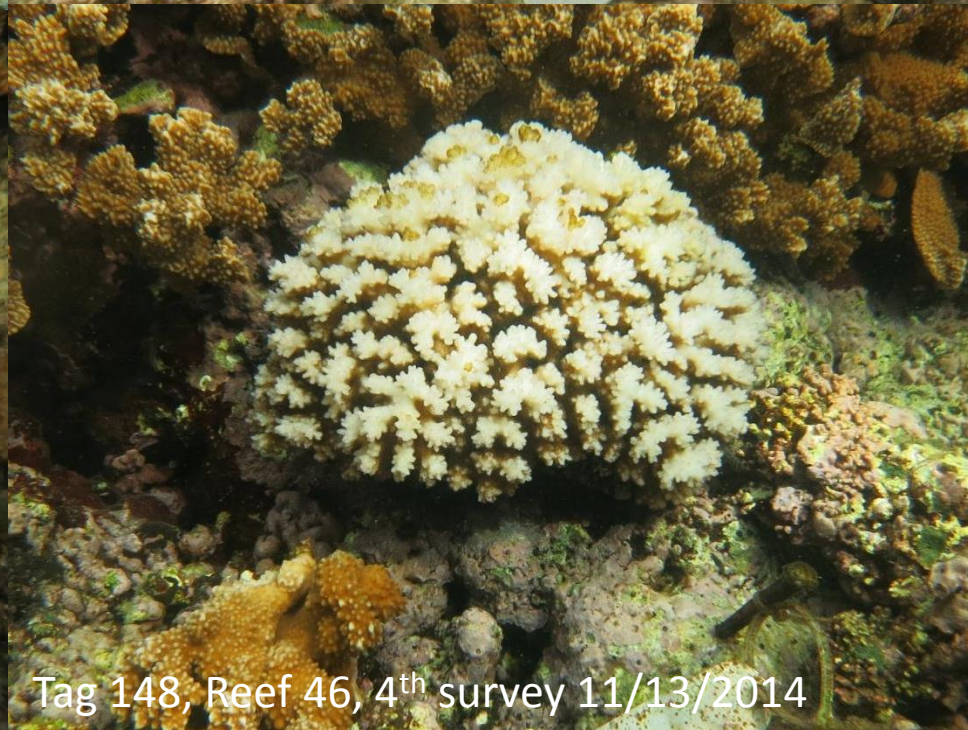
Tag 148, Reef 46, initial survey 10/6/2014



Tag 148, Reef 46, 2nd survey 10/13/2014



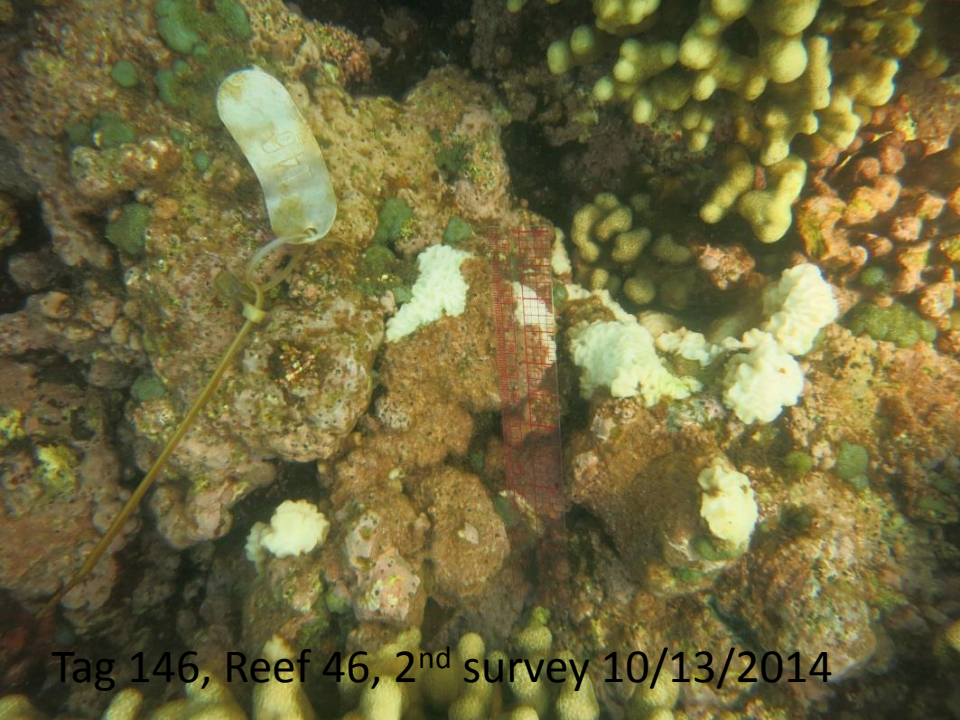
Tag 148, Reef 46, 3rd survey 10/23/2014



Tag 148, Reef 46, 4th survey 11/13/2014



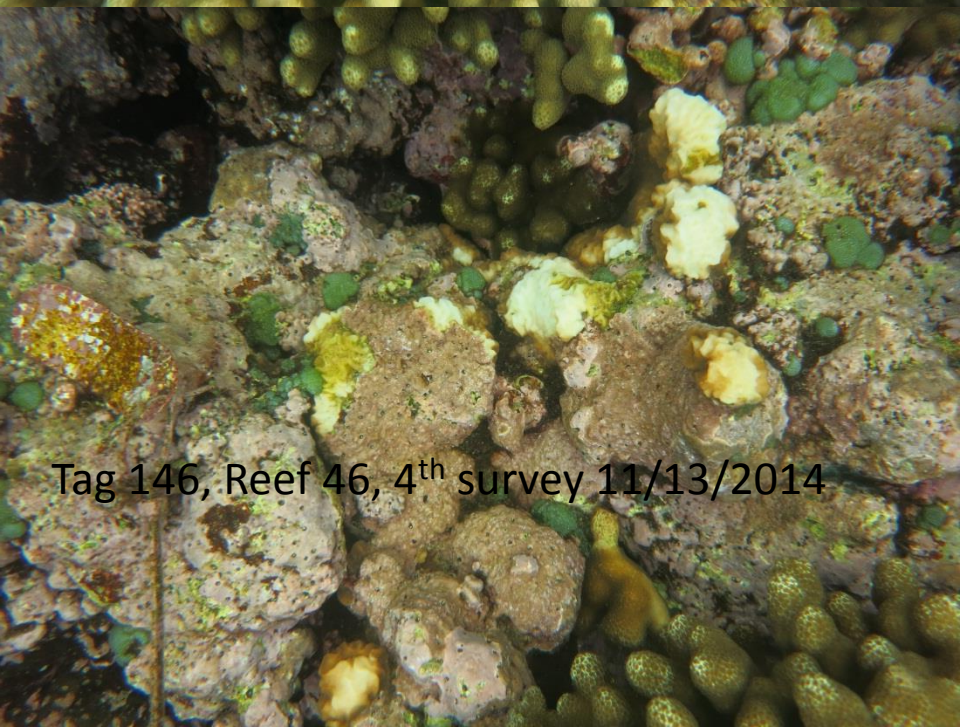
Tag 146, Reef 46, initial survey 10/6/2014



Tag 146, Reef 46, 2nd survey 10/13/2014



Tag 146, Reef 46, 3rd survey 10/23/2014



Tag 146, Reef 46, 4th survey 11/13/2014

Reef 19



Tag 73, Reef 19, initial survey 10/8/2014



Tag 73, Reef 19, 2nd survey 10/13/2014

Tag 73, Reef 19, 3rd survey N/A

Tag 73, Reef 19, 4th survey N/A

*Tag destroyed by boat damage



Tag 75, Reef 19, initial survey 10/8/2014



Tag 75, Reef 19, 2nd survey 10/13/2014



Tag 75, Reef 19, 3rd survey 10/27/2014



Tag 75, Reef 19, 4th survey 11/13/2014



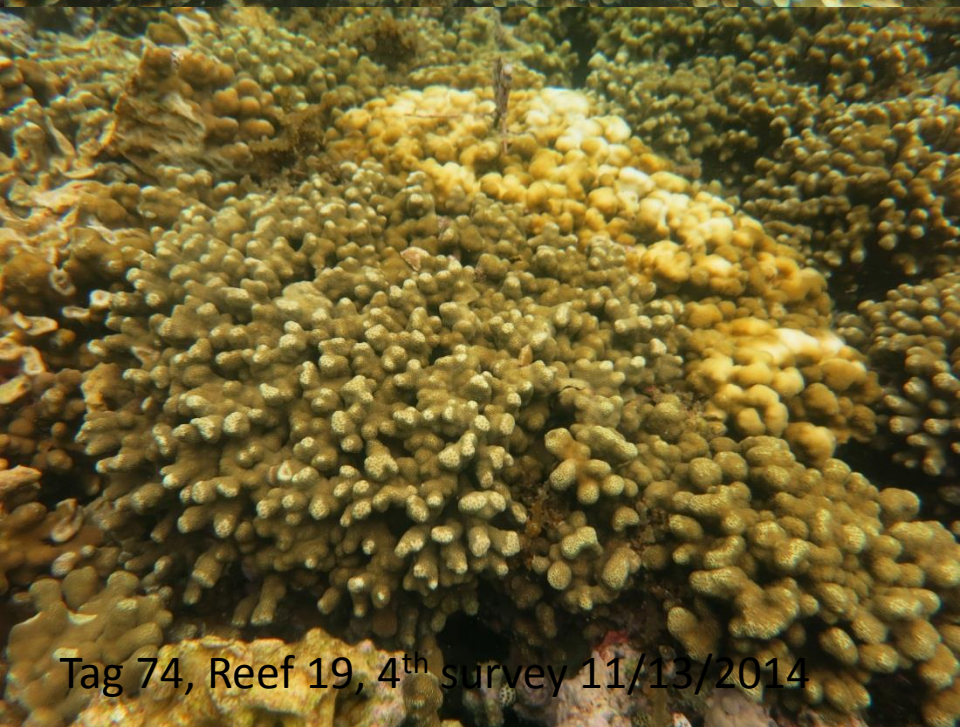
Tag 74, Reef 19, initial survey 10/8/2014



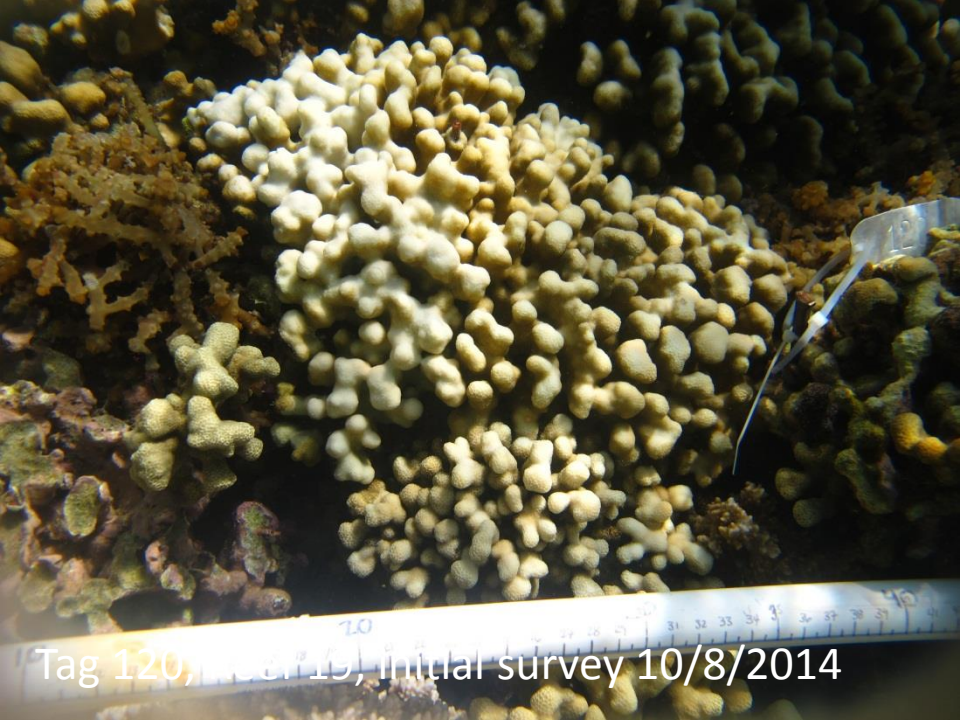
Tag 74, Reef 19, 2nd survey 10/13/2014



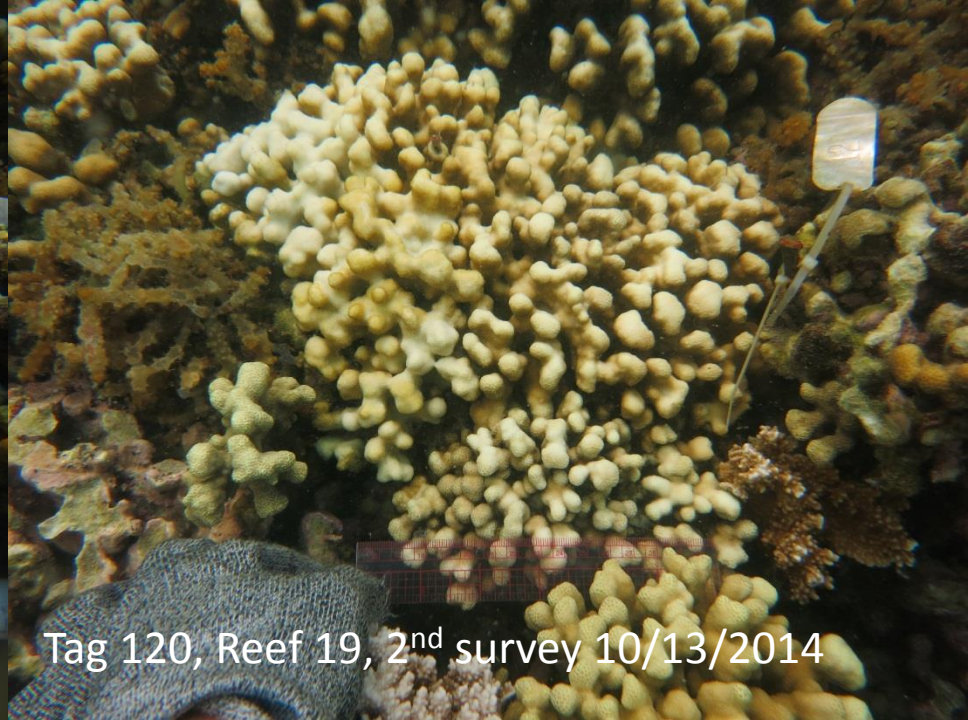
Tag 74, Reef 19, 3rd survey 10/27/2014



Tag 74, Reef 19, 4th survey 11/13/2014



Tag 120, Reef 19, initial survey 10/8/2014



Tag 120, Reef 19, 2nd survey 10/13/2014

Tag 120, Reef 19, 3rd survey N/A

Tag 120, Reef 19, 4th survey N/A

*Tag destroyed by boat damage



Tag 196, Reef 19, initial survey 10/8/2014



Tag 196, Reef 19, 2nd survey 10/13/2014



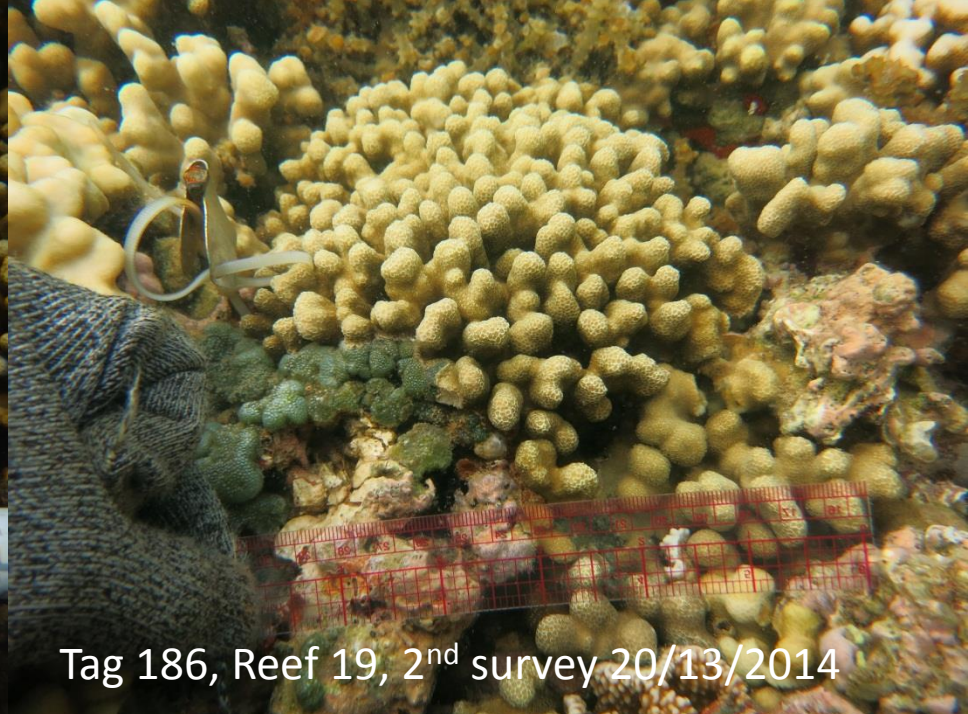
Tag 196, Reef 19, 3rd survey 10/27/2014



Tag 196, Reef 19, 4th survey 11/13/2014



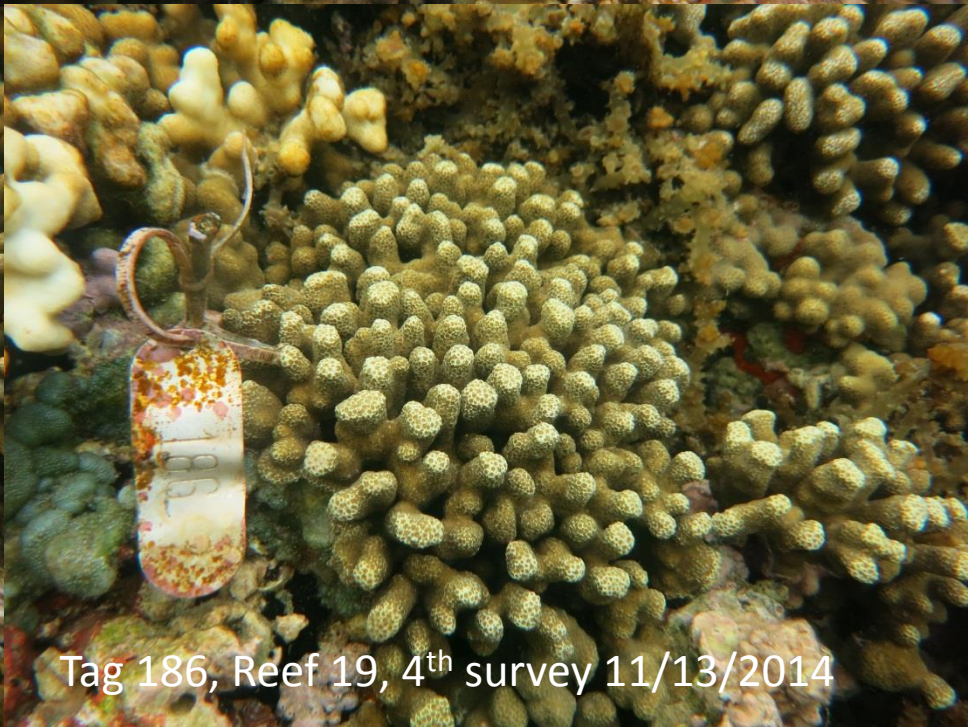
Tag 186, Reef 19, initial survey 10/8/2014



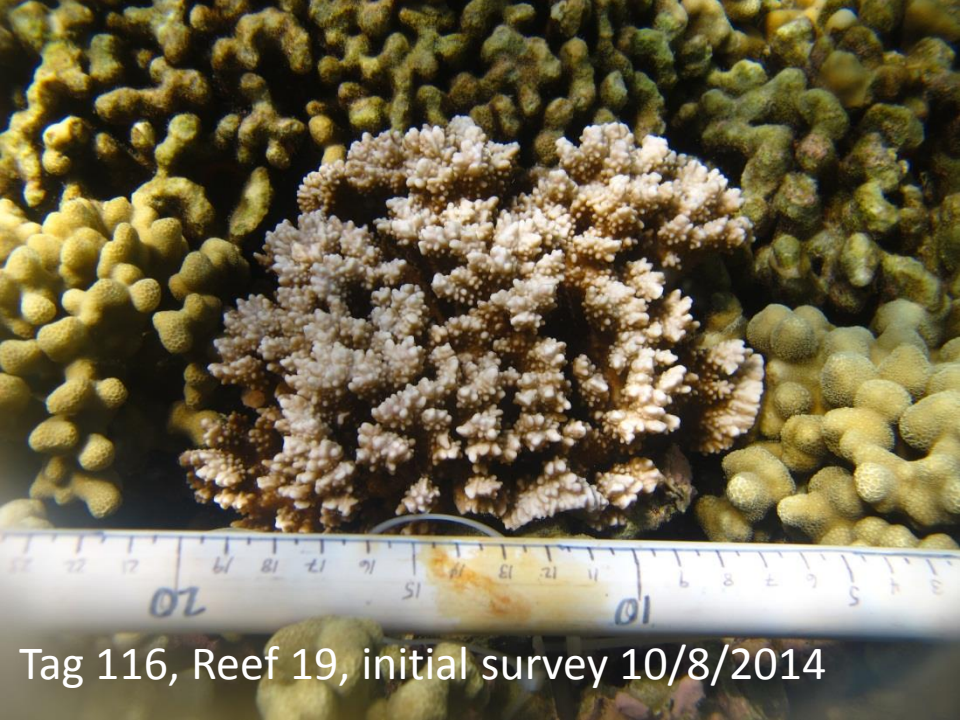
Tag 186, Reef 19, 2nd survey 20/13/2014



Tag 186, Reef 19, 3rd survey 10/27/2014



Tag 186, Reef 19, 4th survey 11/13/2014



Tag 116, Reef 19, initial survey 10/8/2014

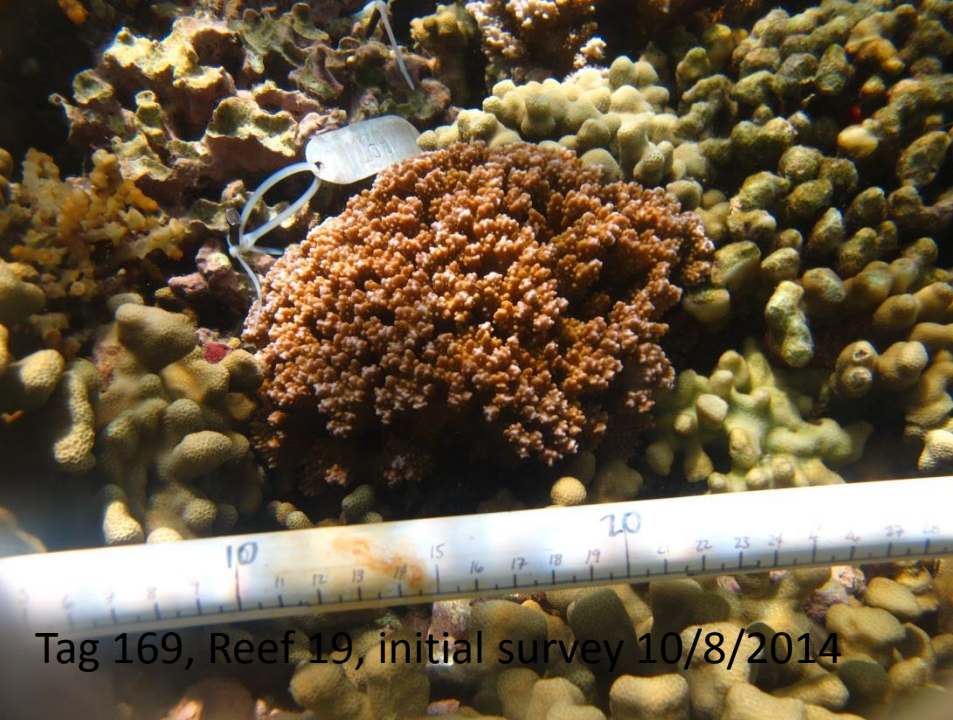


Tag 116, Reef 19, 2nd survey 10/13/2014

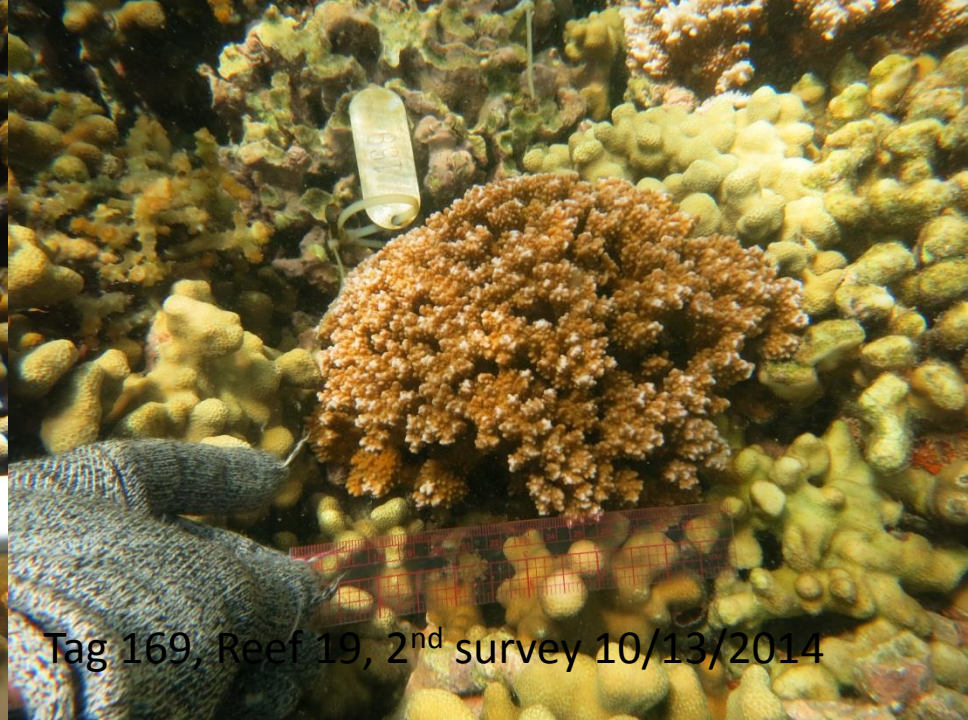
Tag 116, Reef 19, 3rd survey N/A

Tag 116, Reef 19, 4th survey N/A

*Tag destroyed by boat damage



Tag 169, Reef 19, initial survey 10/8/2014

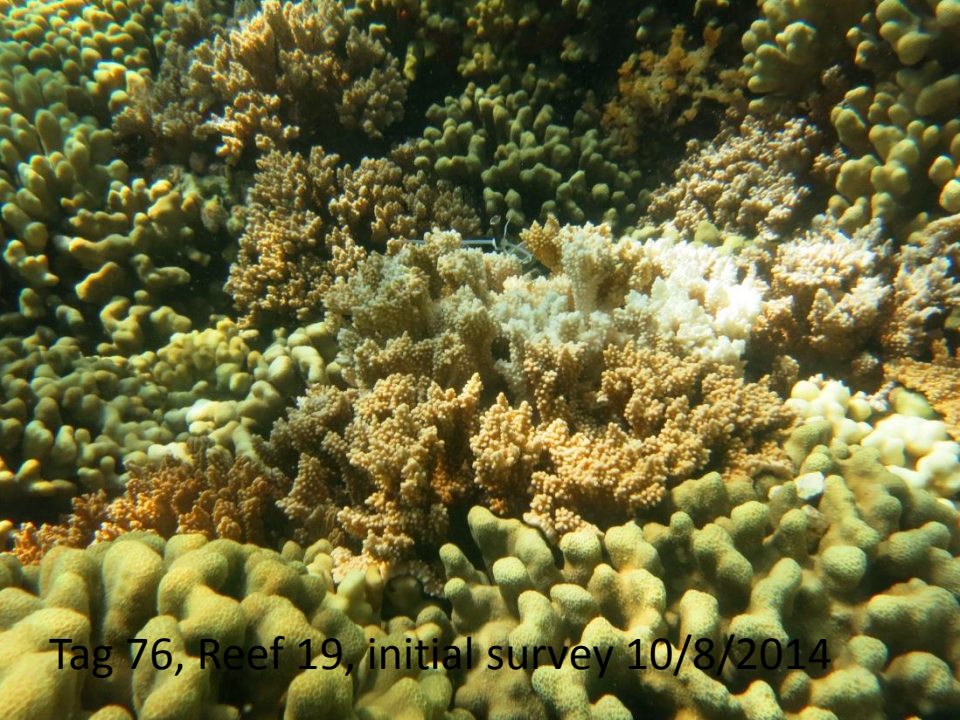


Tag 169, Reef 19, 2nd survey 10/13/2014

Tag 169, Reef 19, 3rd survey N/A

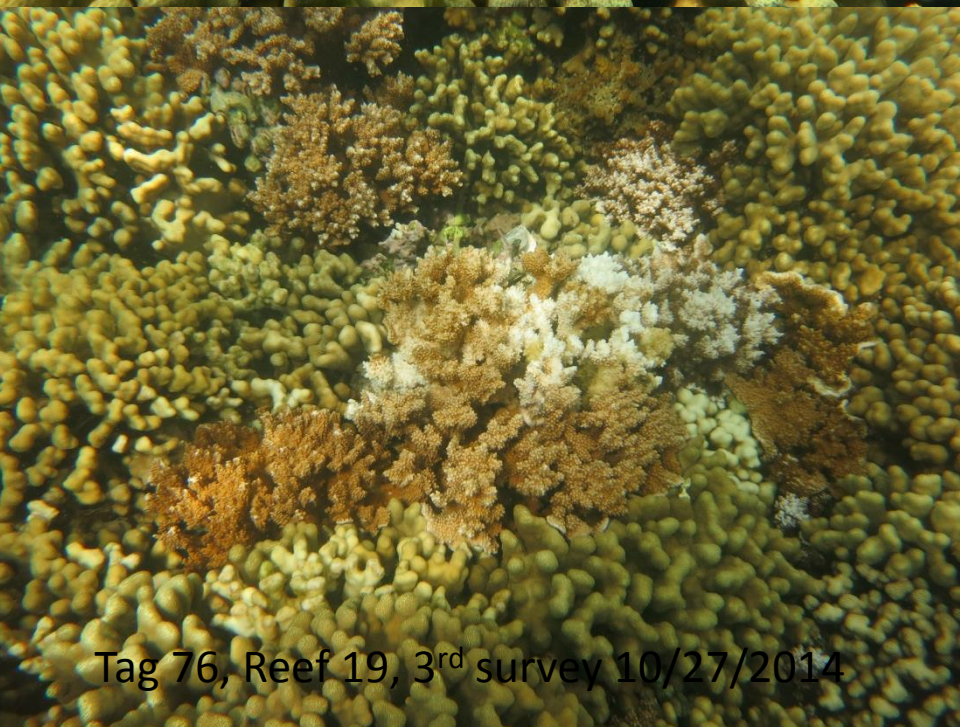
Tag 169, Reef 19, 4th survey N/A

*Tag destroyed by boat damage

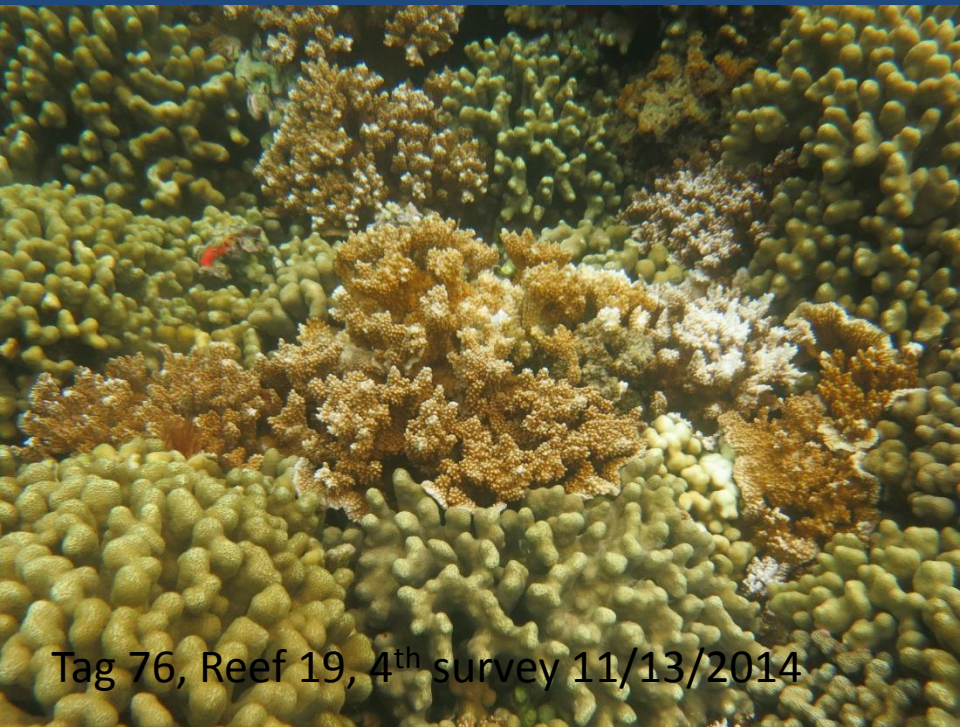


Tag 76, Reef 19, 2nd survey N/A

Tag 76, Reef 19, initial survey 10/8/2014



Tag 76, Reef 19, 3rd survey 10/27/2014



Tag 76, Reef 19, 4th survey 11/13/2014



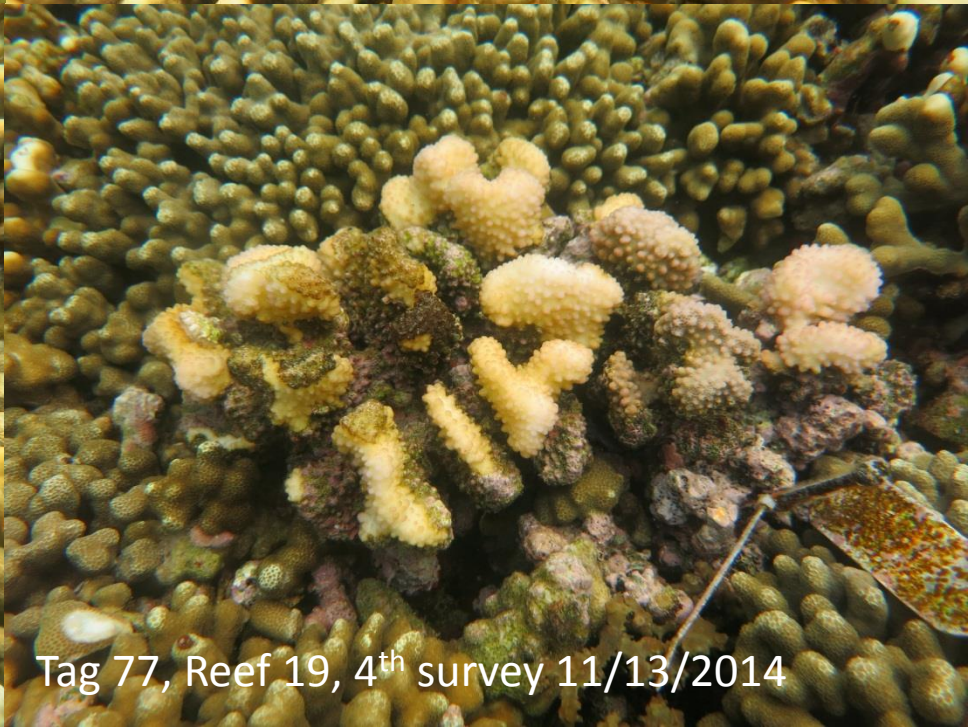
Tag 77, Reef 19, initial survey 10/8/2014



Tag 77, Reef 19, 2nd survey 10/13/2014



Tag 77, Reef 19, 3rd survey 10/27/2014

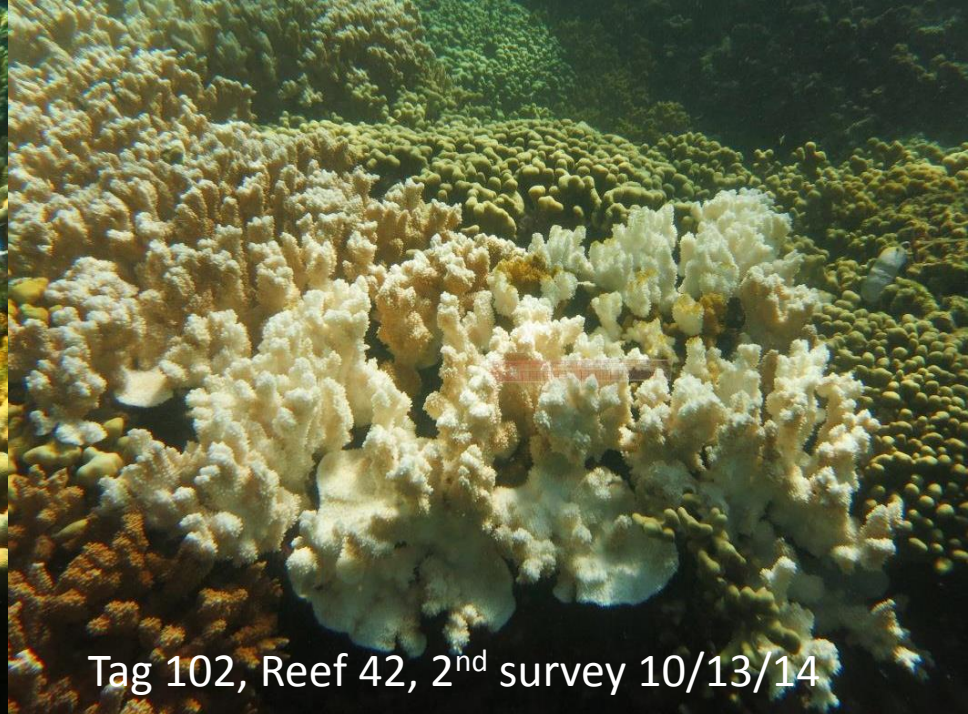


Tag 77, Reef 19, 4th survey 11/13/2014

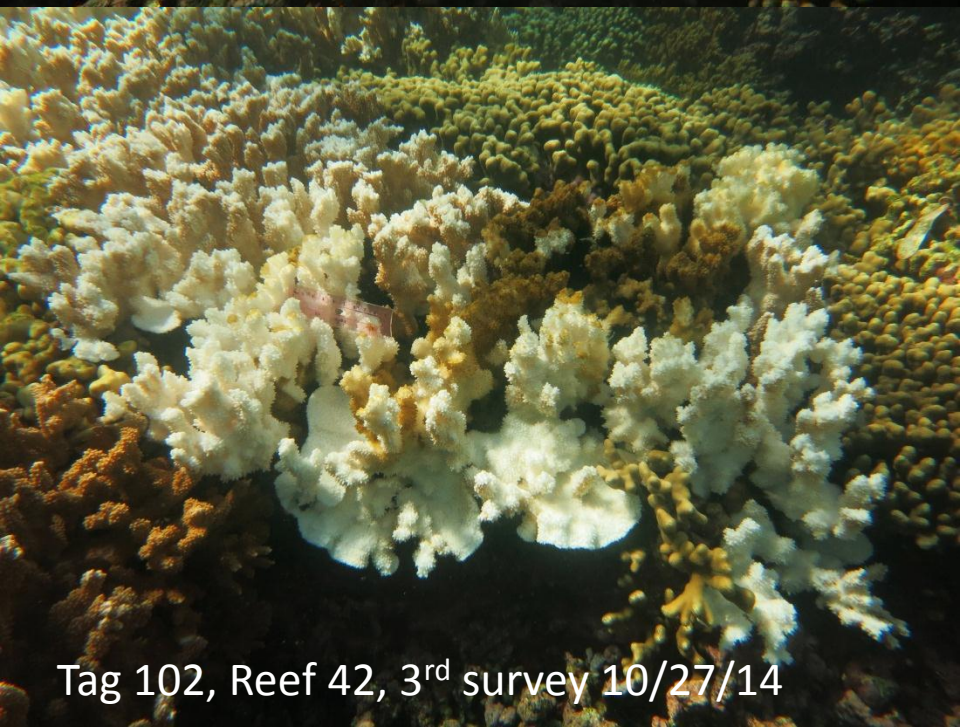
Reef 42



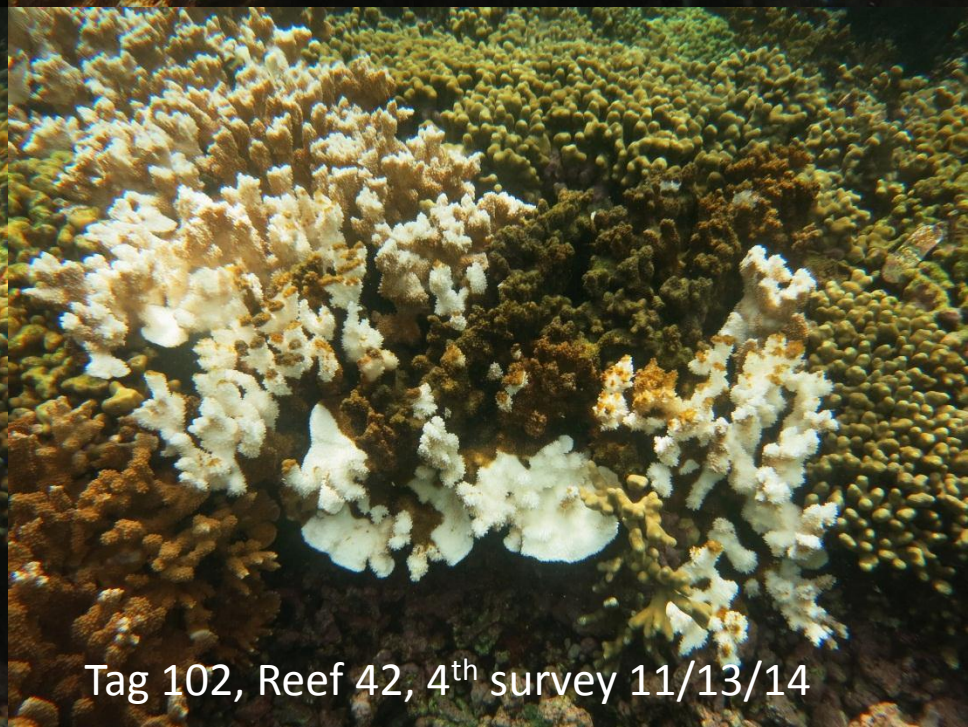
Tag 102, Reef 42, initial survey 10/7/14



Tag 102, Reef 42, 2nd survey 10/13/14

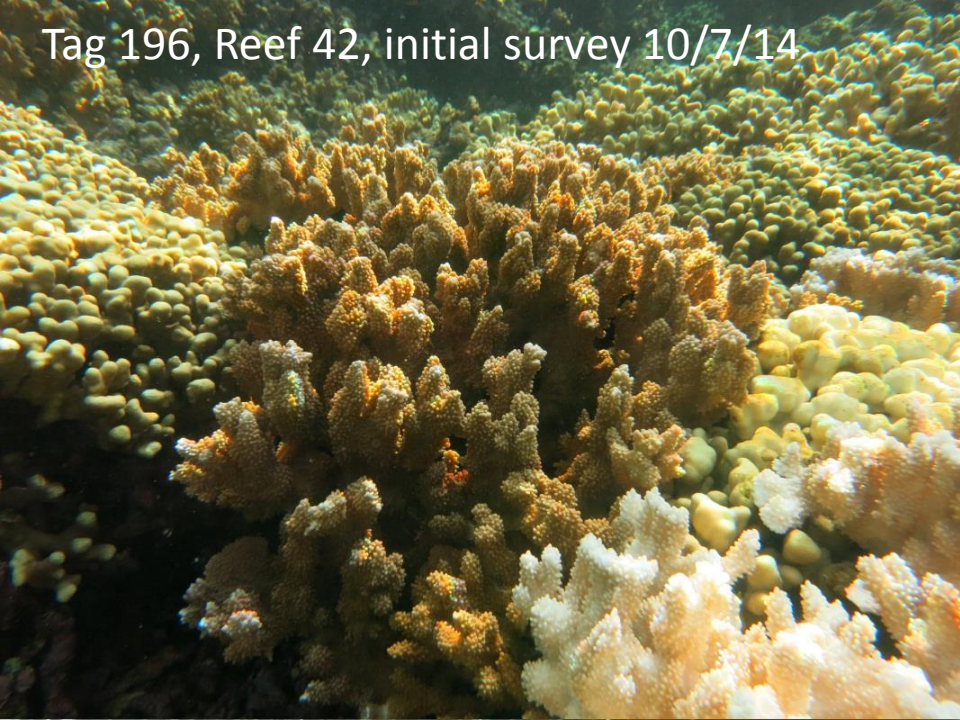


Tag 102, Reef 42, 3rd survey 10/27/14

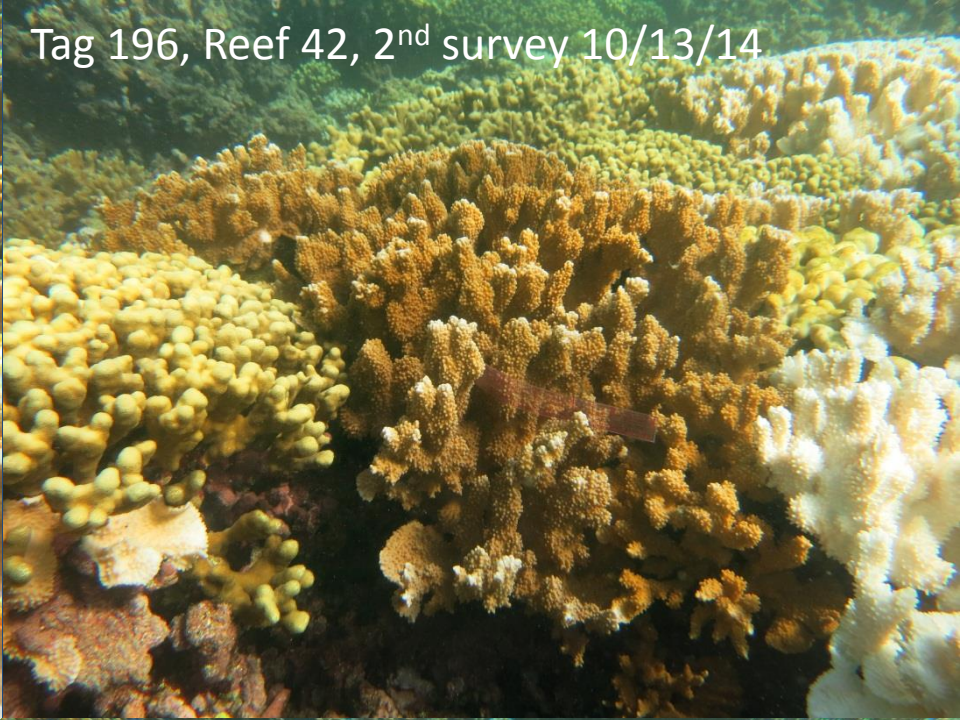


Tag 102, Reef 42, 4th survey 11/13/14

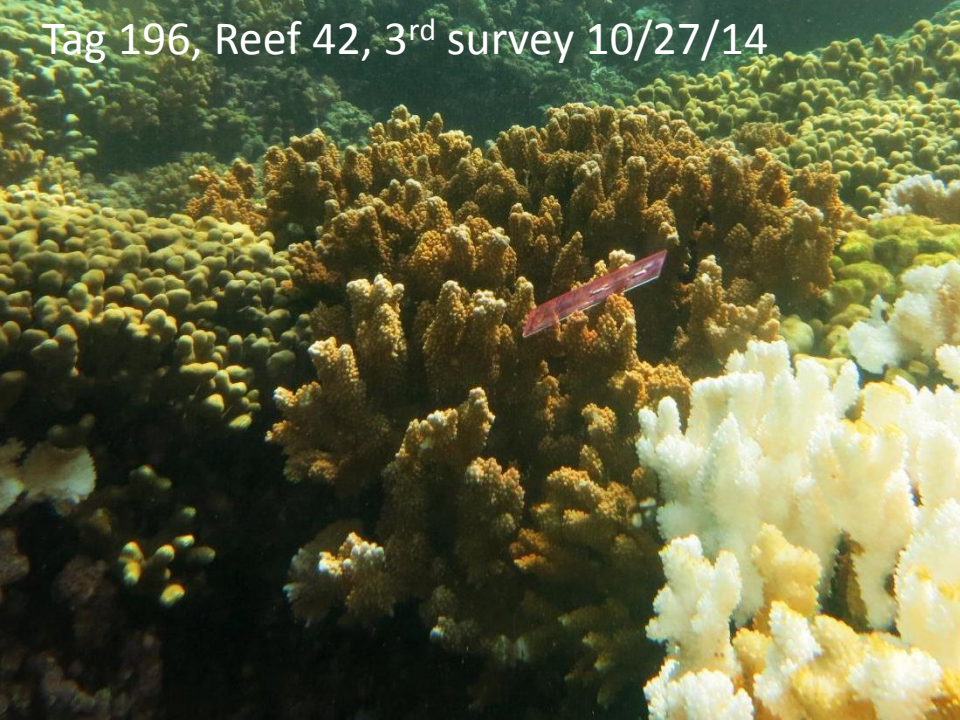
Tag 196, Reef 42, initial survey 10/7/14



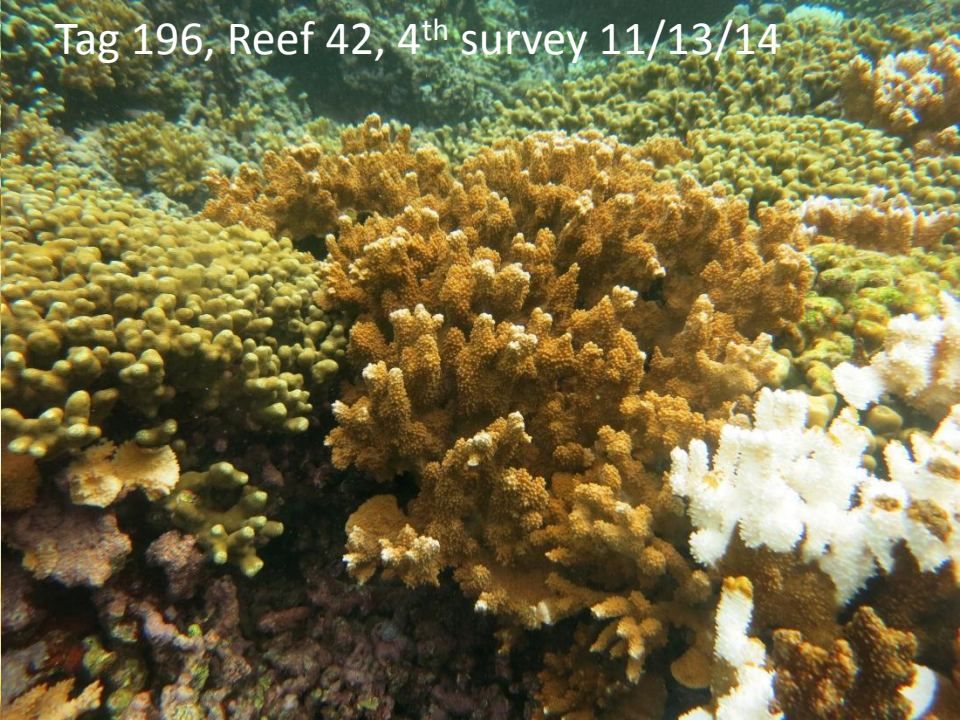
Tag 196, Reef 42, 2nd survey 10/13/14



Tag 196, Reef 42, 3rd survey 10/27/14

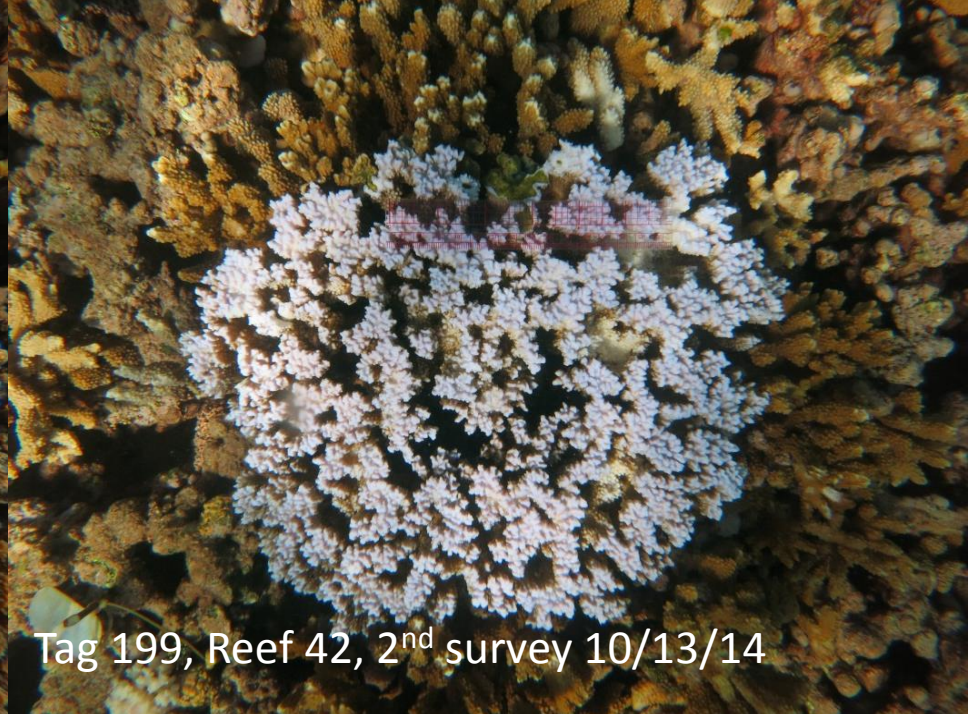


Tag 196, Reef 42, 4th survey 11/13/14

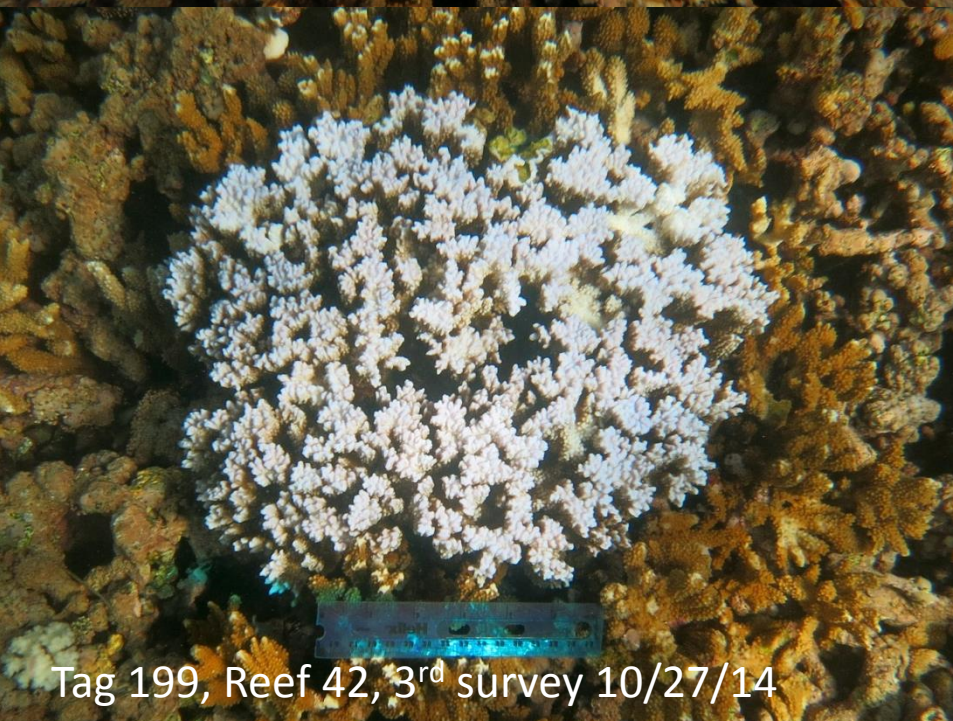




Tag 199, Reef 42, initial survey 10/7/14



Tag 199, Reef 42, 2nd survey 10/13/14

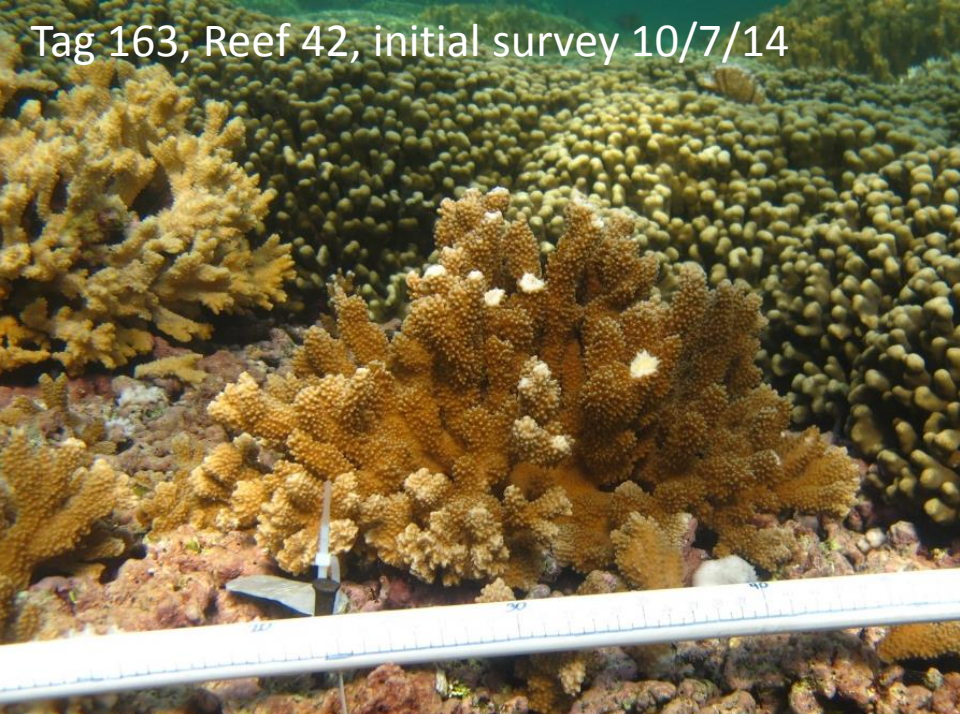


Tag 199, Reef 42, 3rd survey 10/27/14



Tag 199, Reef 42, 4th survey 11/13/14

Tag 163, Reef 42, initial survey 10/7/14



Tag 163, Reef 42, 2nd survey 10/13/14

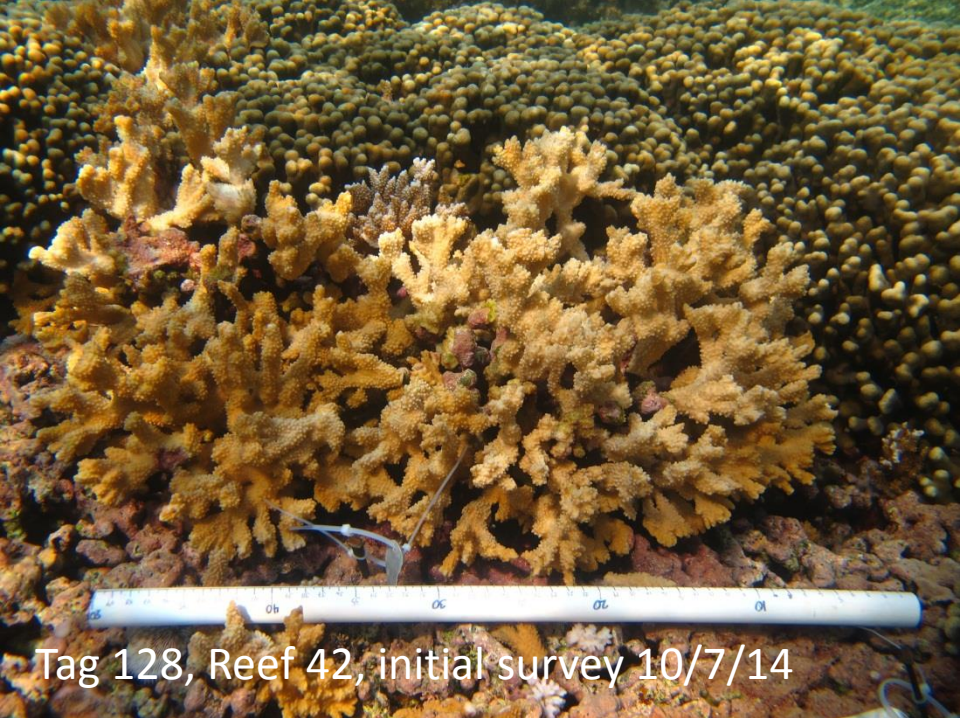


Tag 163, Reef 42, 3rd survey 10/27/14



Tag 163, Reef 42, 4th survey 11/13/14

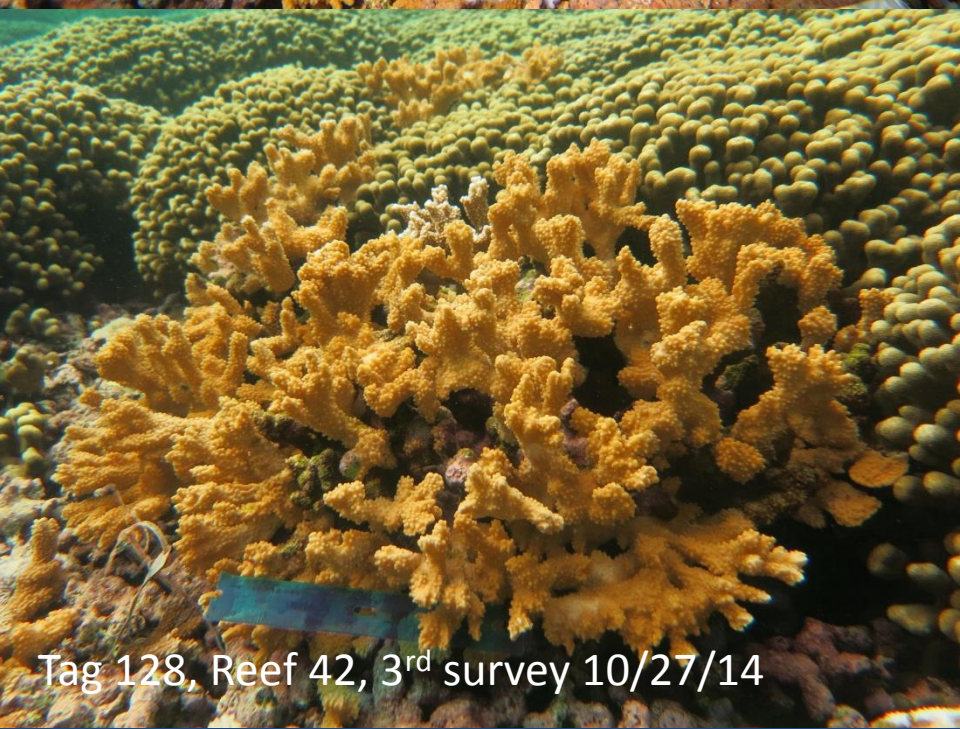




Tag 128, Reef 42, initial survey 10/7/14



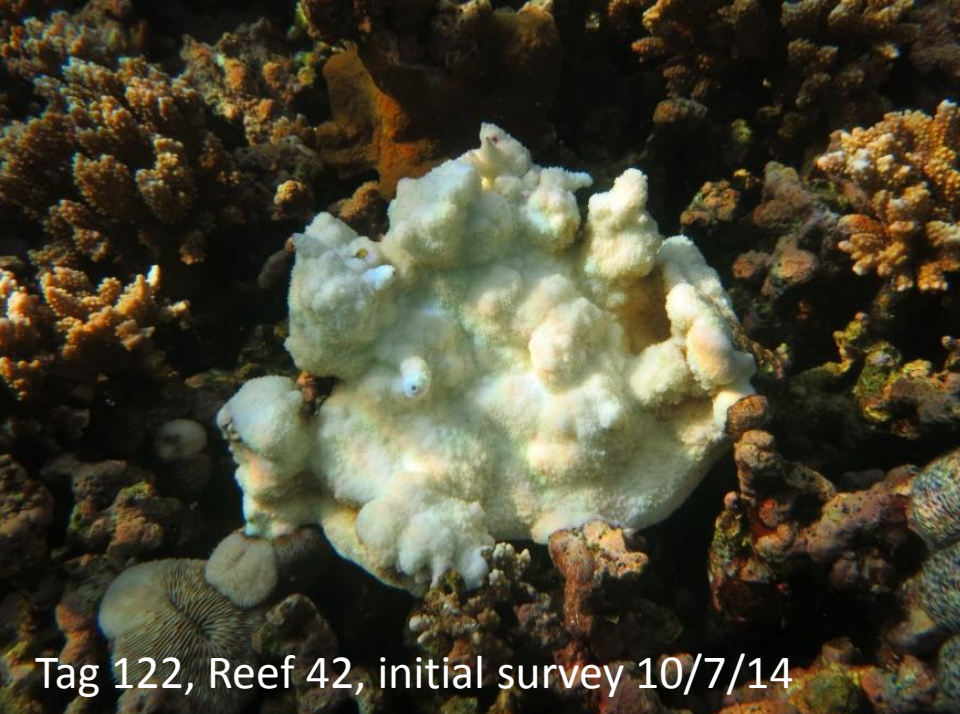
Tag 128, Reef 42, 2nd survey 10/13/14



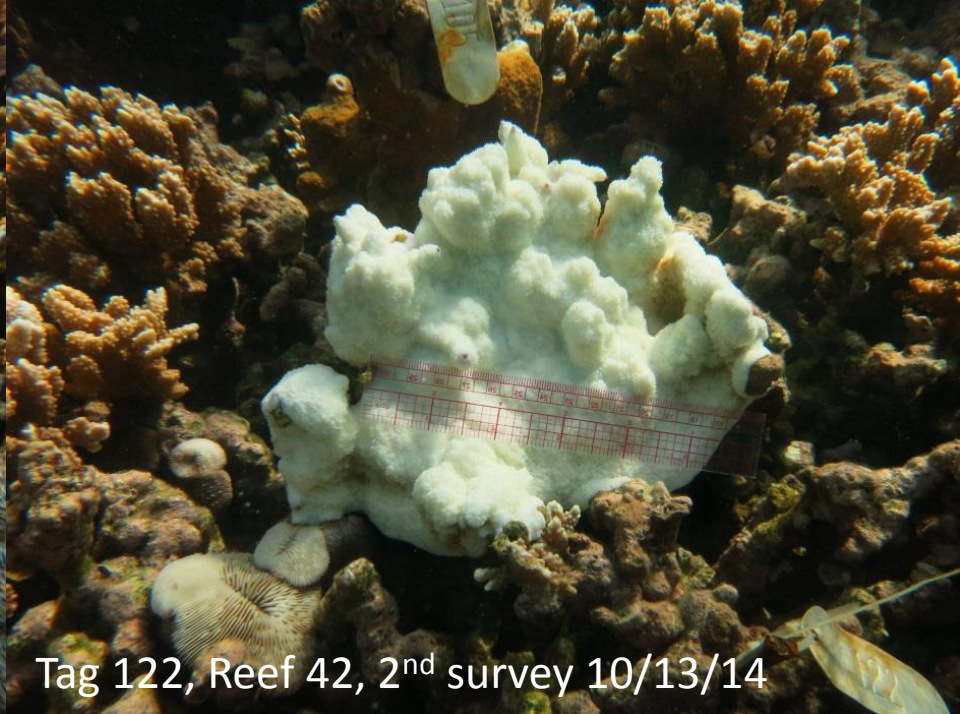
Tag 128, Reef 42, 3rd survey 10/27/14



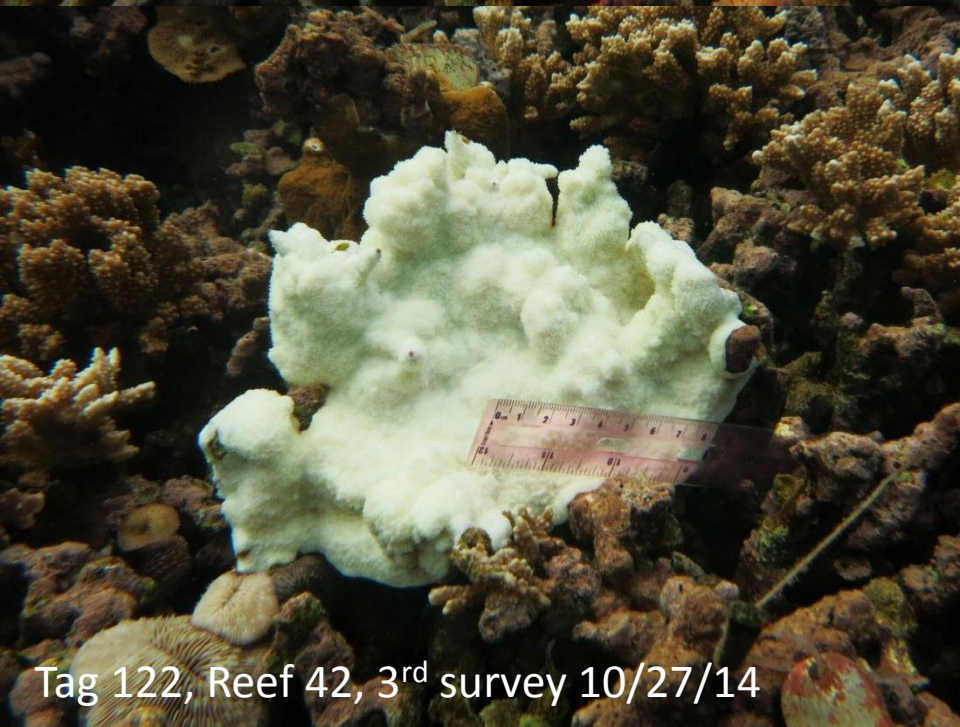
Tag 128, Reef 42, 4th survey 11/13/14



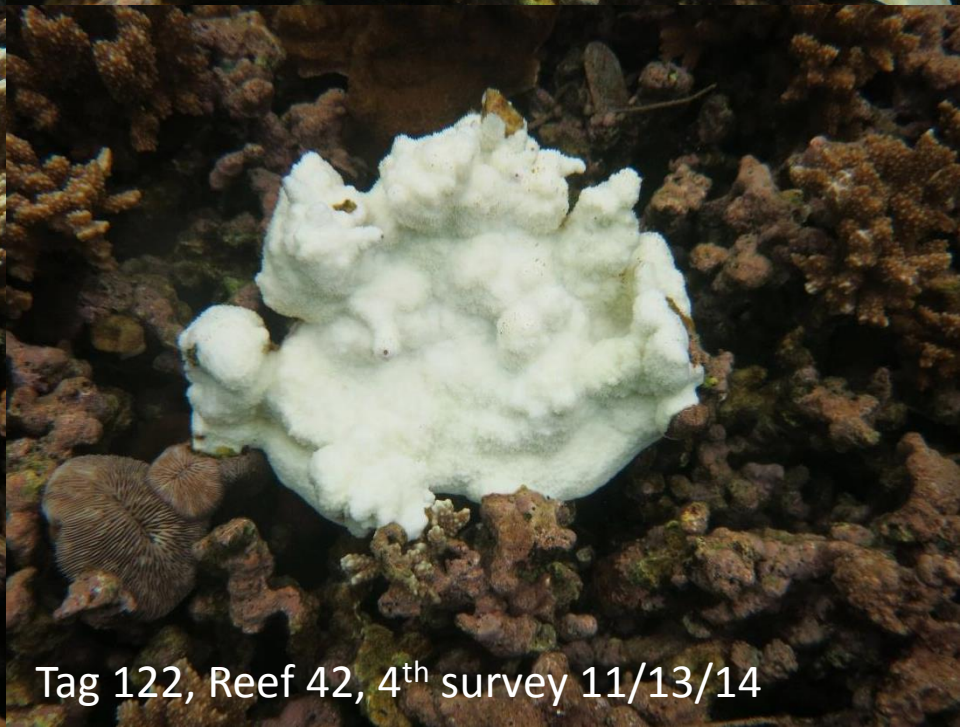
Tag 122, Reef 42, initial survey 10/7/14



Tag 122, Reef 42, 2nd survey 10/13/14



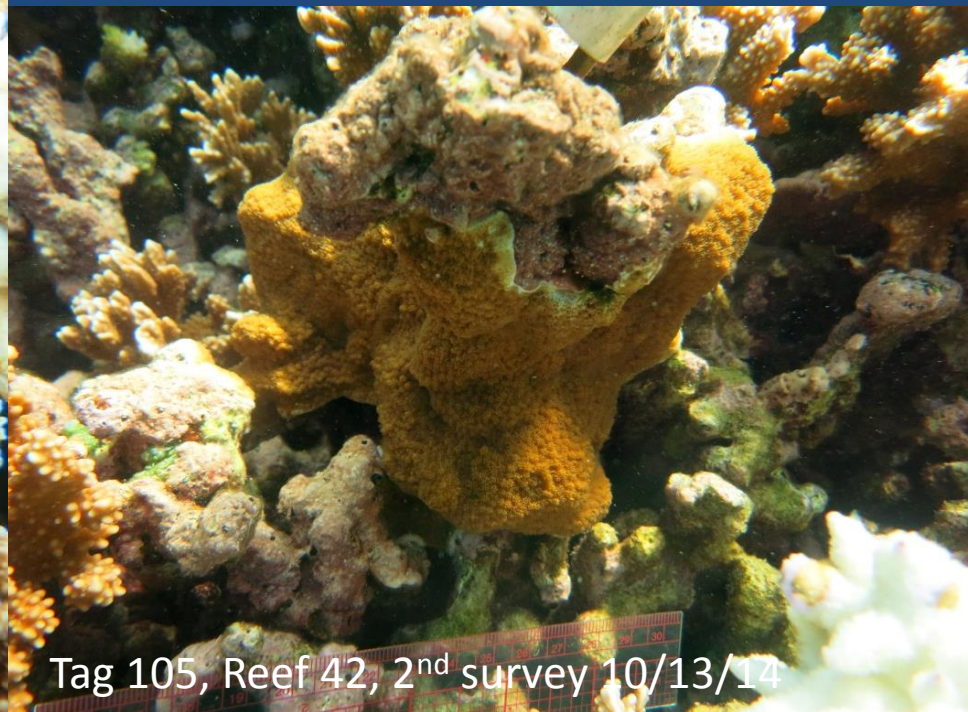
Tag 122, Reef 42, 3rd survey 10/27/14



Tag 122, Reef 42, 4th survey 11/13/14



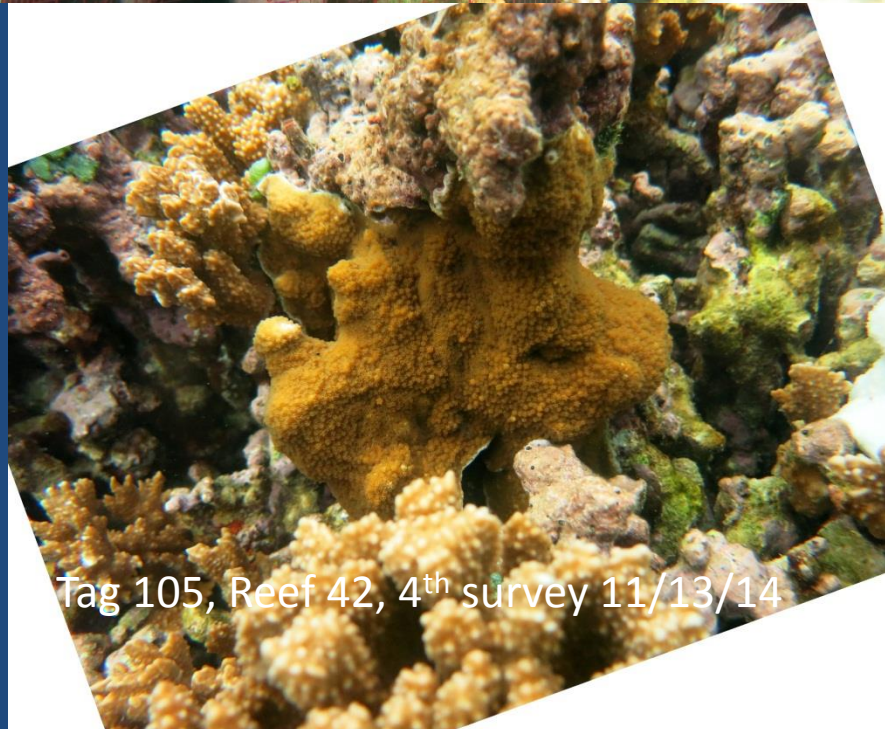
Tag 105, Reef 42, initial survey 10/7/14



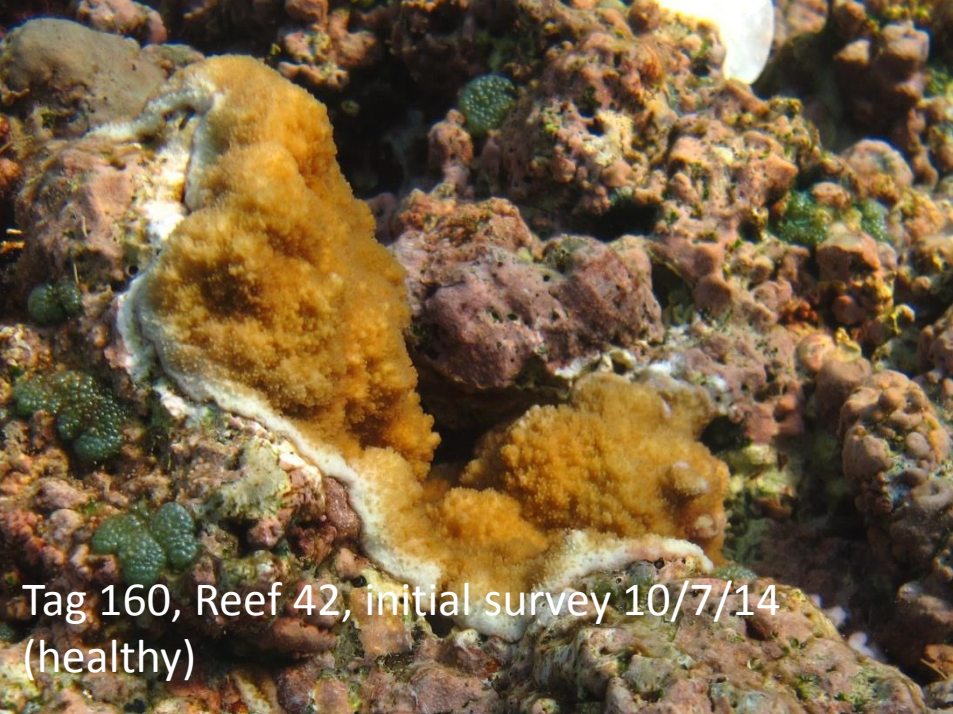
Tag 105, Reef 42, 2nd survey 10/13/14



Tag 105, Reef 42, 3rd survey 10/27/14



Tag 105, Reef 42, 4th survey 11/13/14



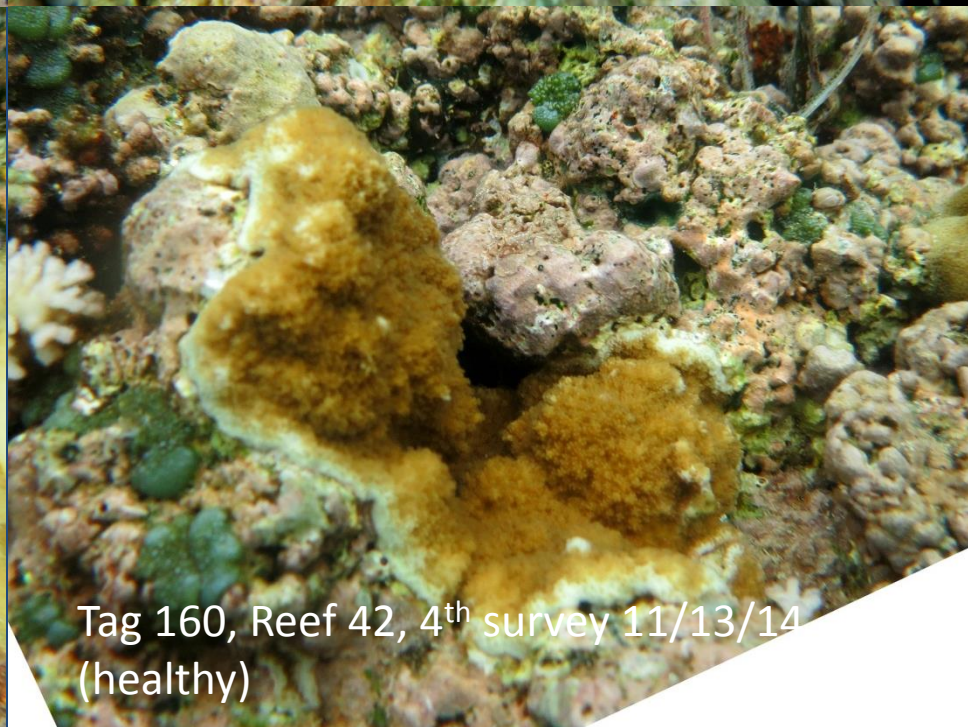
Tag 160, Reef 42, initial survey 10/7/14
(healthy)



Tag 160, Reef 42, 2nd survey 10/13/14
(healthy)



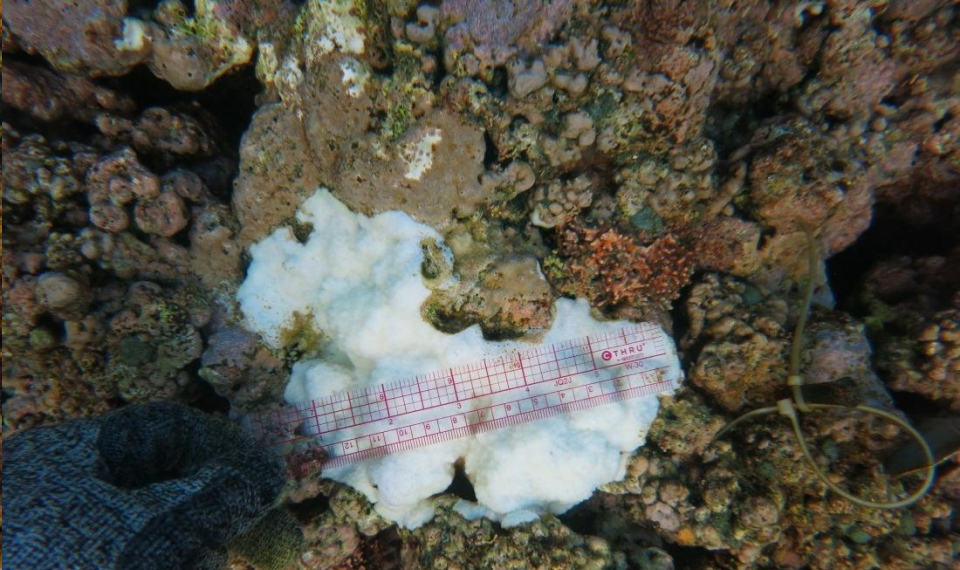
Tag 160, Reef 42, 3rd survey 10/27/14
(healthy)



Tag 160, Reef 42, 4th survey 11/13/14
(healthy)



Tag 160, Reef 42, initial survey 10/7/14
(bleached)



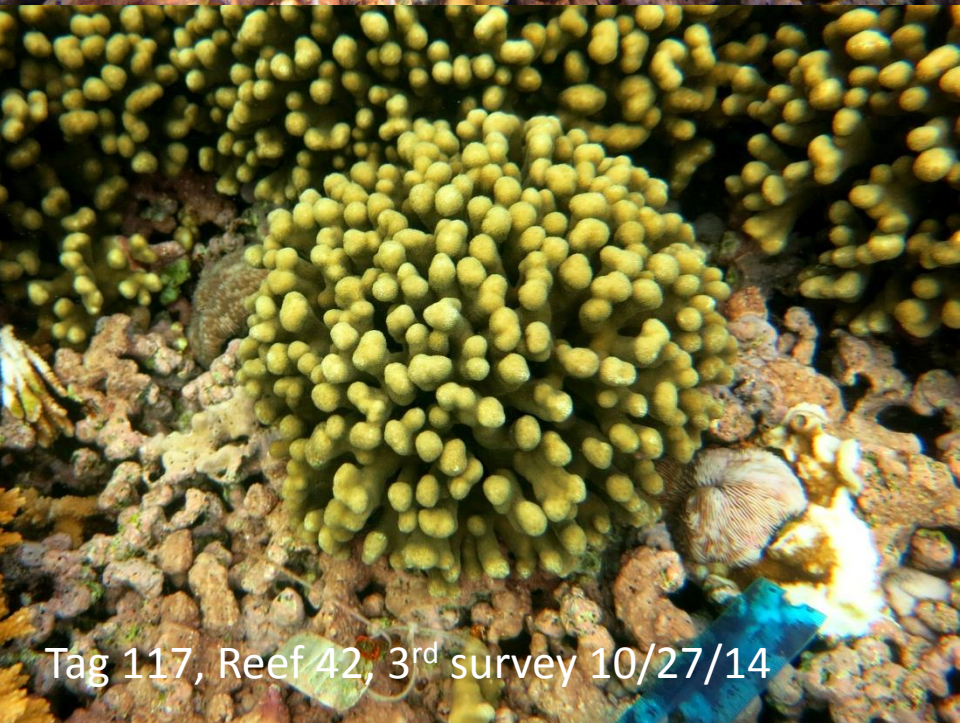
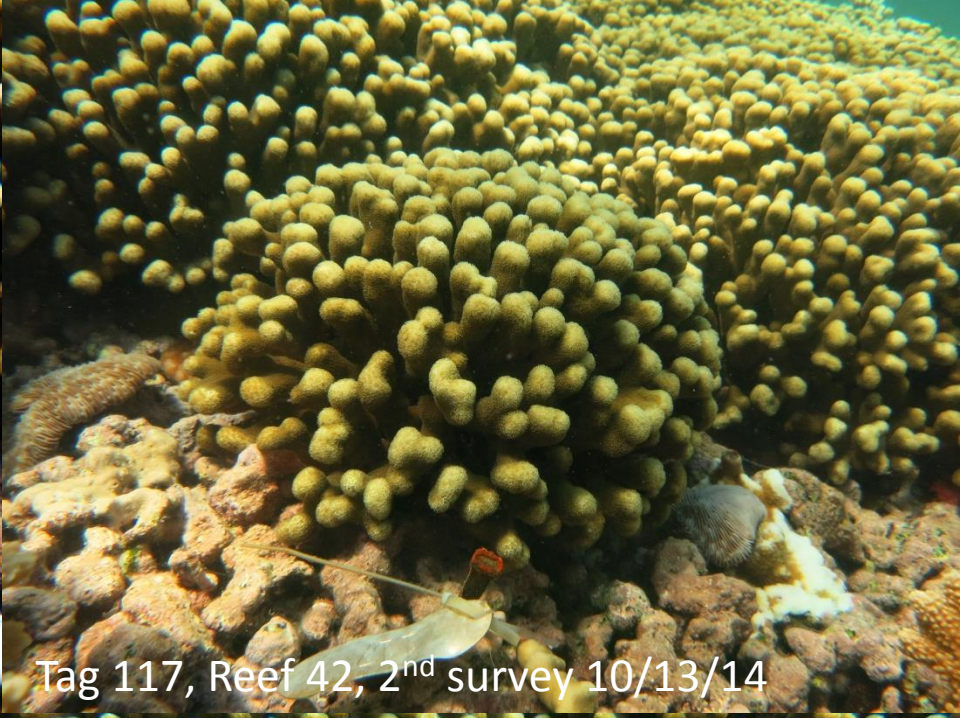
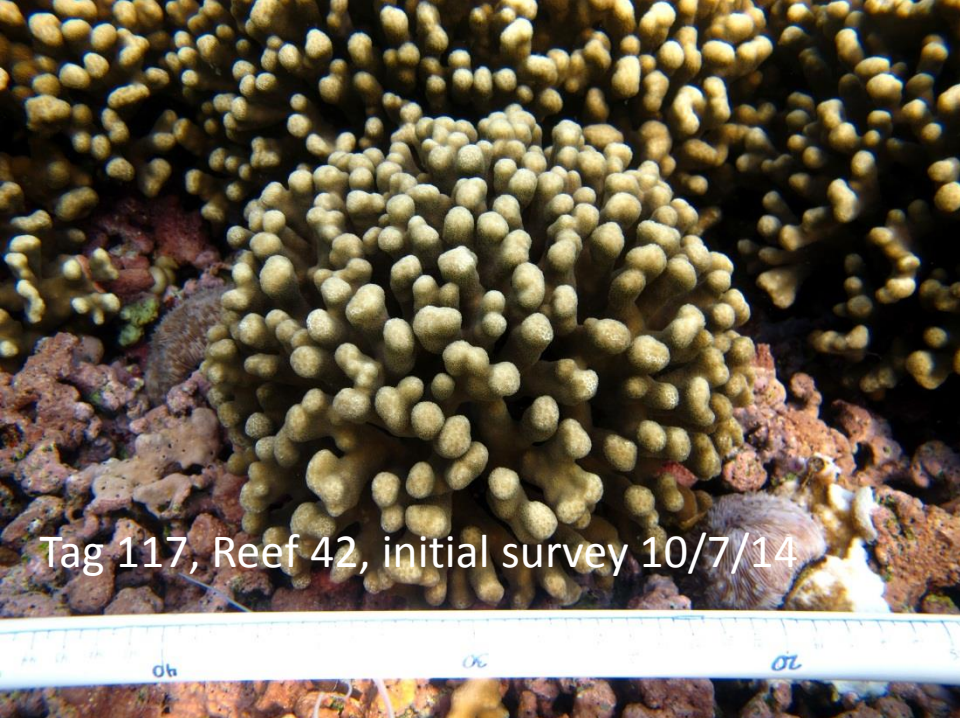
Tag 160, Reef 42, 2nd survey 10/13/14
(bleached)



Tag 160, Reef 42, 3rd survey 10/27/14
(bleached)



Tag 160, Reef 42, 4th survey 11/13/14
(bleached)



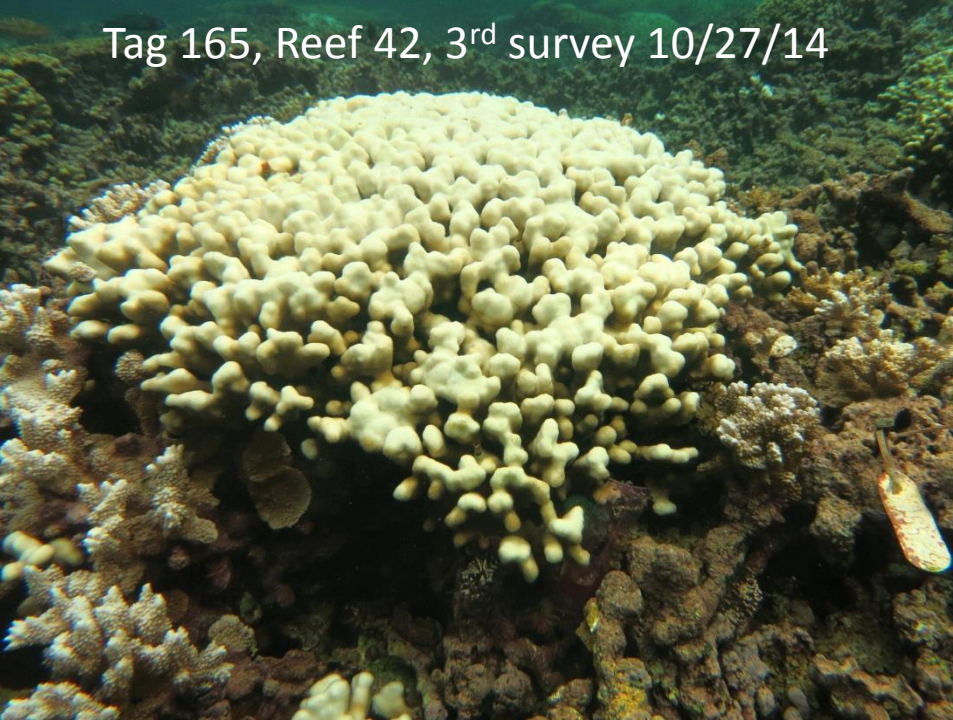
Tag 165, Reef 42, initial survey 10/7/14



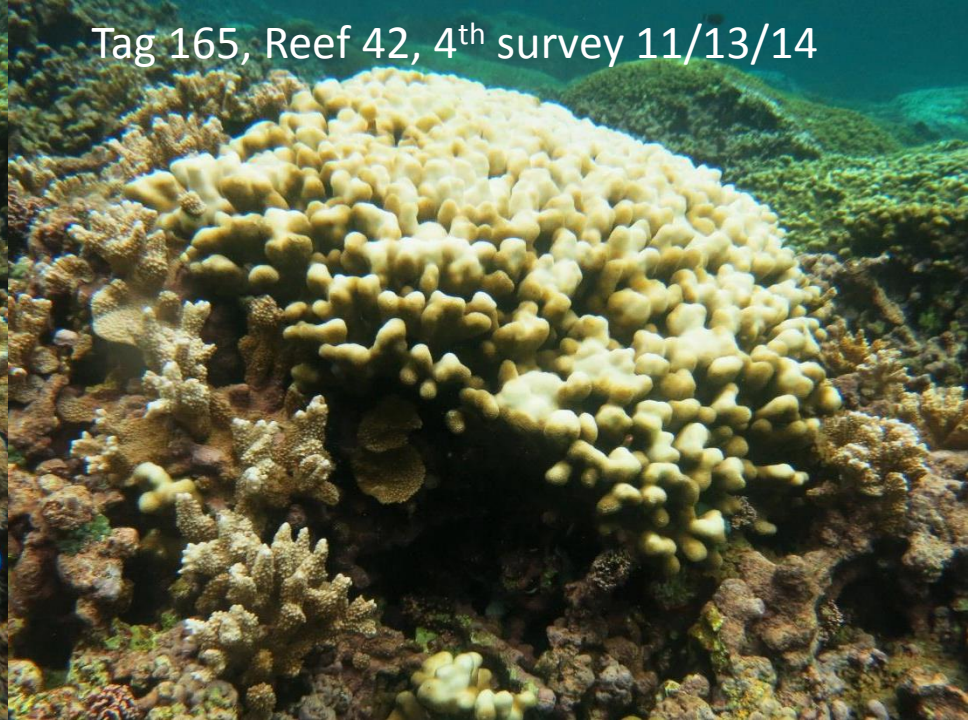
Tag 165, Reef 42, 2nd survey 10/13/14



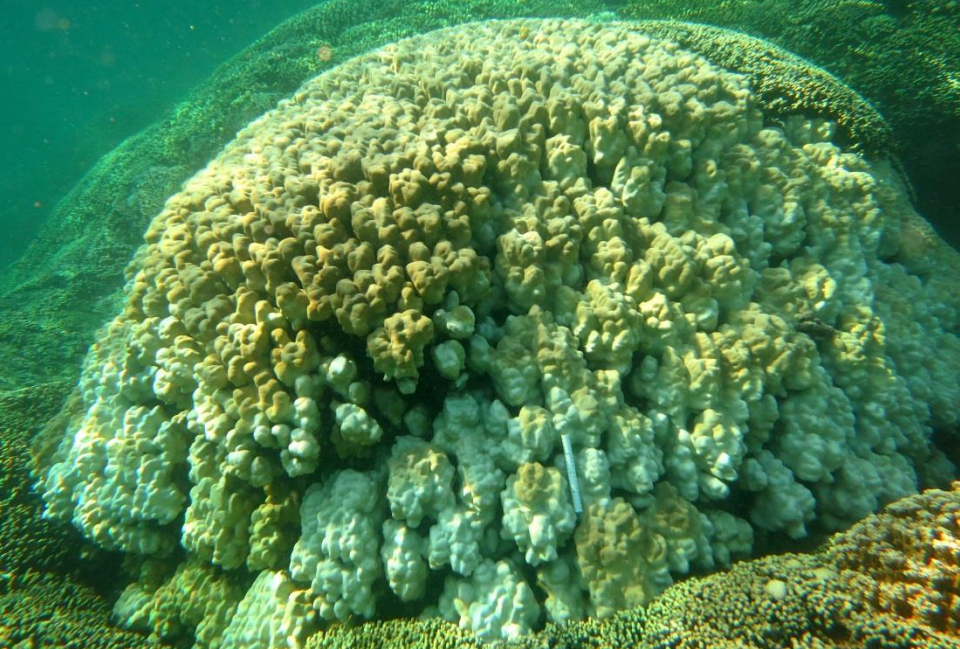
Tag 165, Reef 42, 3rd survey 10/27/14



Tag 165, Reef 42, 4th survey 11/13/14



Large *P. lobata*, Reef 42, initial survey 10/7/14



Large *P. lobata*, Reef 42, 2nd survey 10/13/14



Large *P. lobata*, Reef 42, 3rd survey 10/27/14



Large *P. lobata*, Reef 42, 4th survey 11/13/14



Reef 12

Tag 130, Reef 12, initial survey 10/6/14



Tag 130, Reef 12, 2nd survey 10/15/14

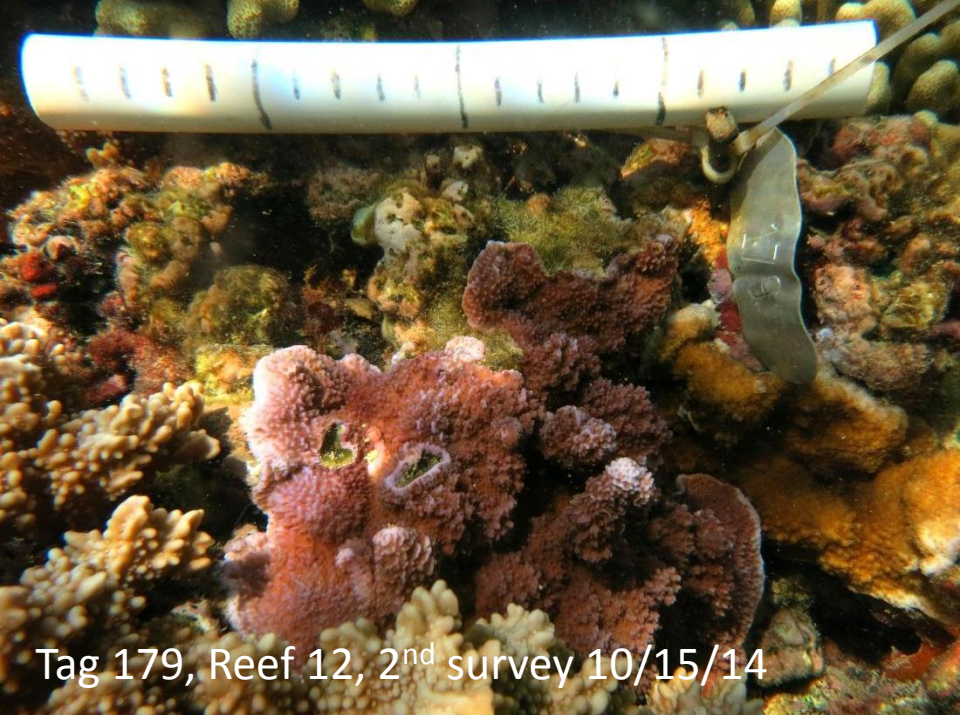
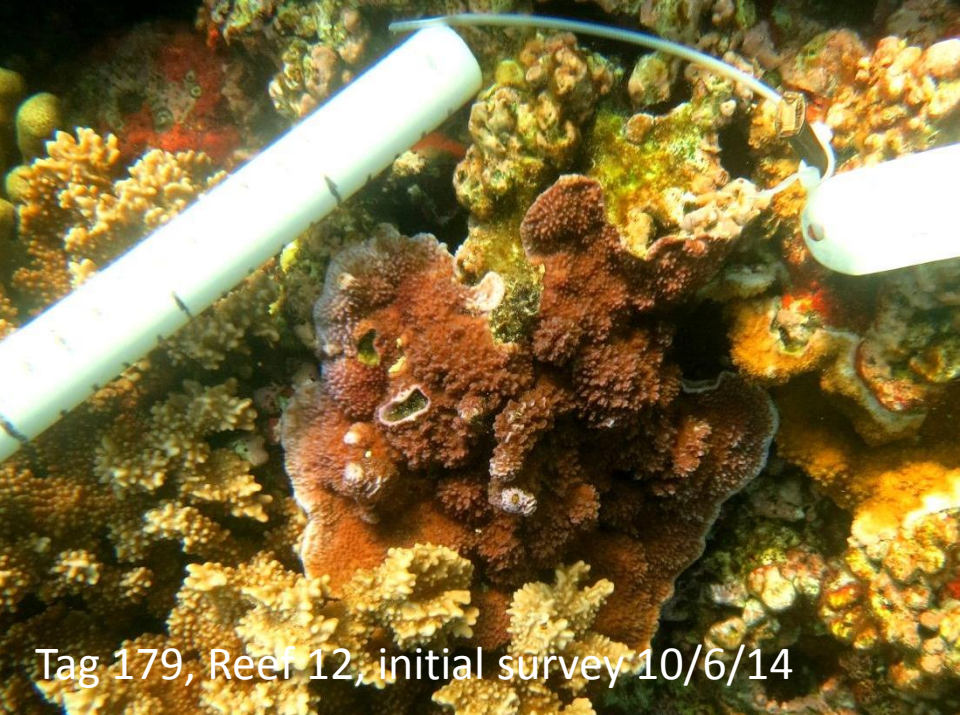


Tag 130, Reef 12, 3rd survey 10/27/14



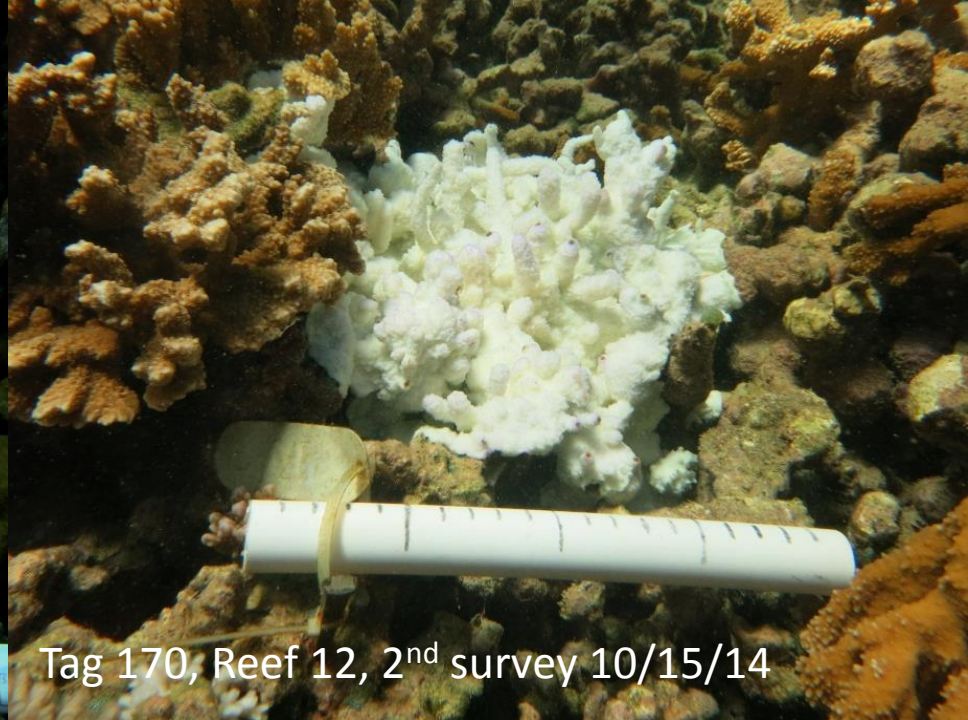
Tag 130, Reef 12, 4th survey 11/24/14







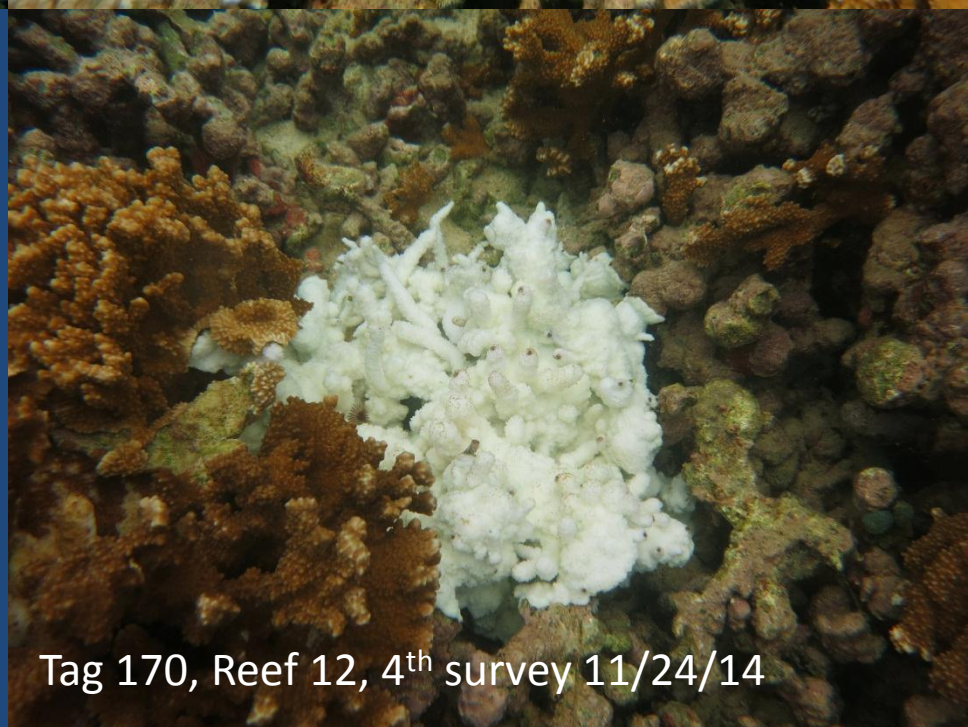
Tag 170, Reef 12, initial survey 10/6/14



Tag 170, Reef 12, 2nd survey 10/15/14



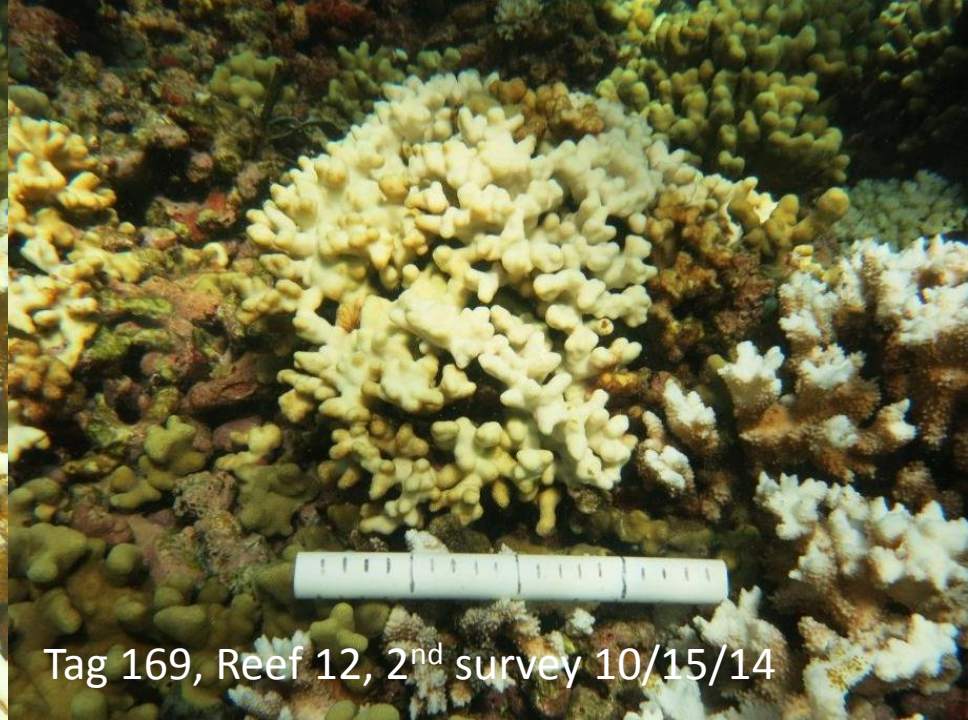
Tag 170, Reef 12, 3rd survey 10/27/14



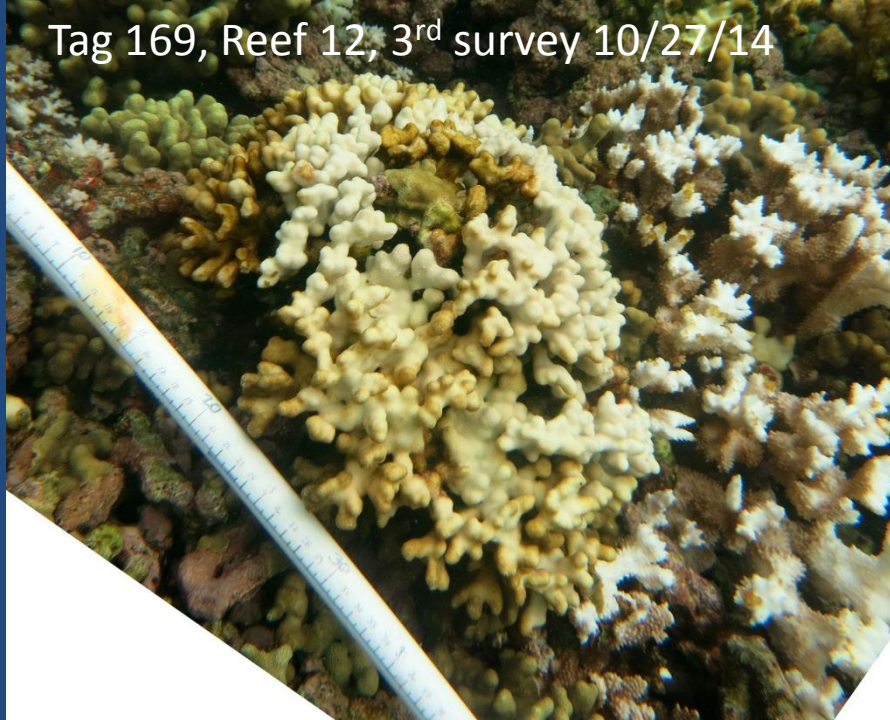
Tag 170, Reef 12, 4th survey 11/24/14



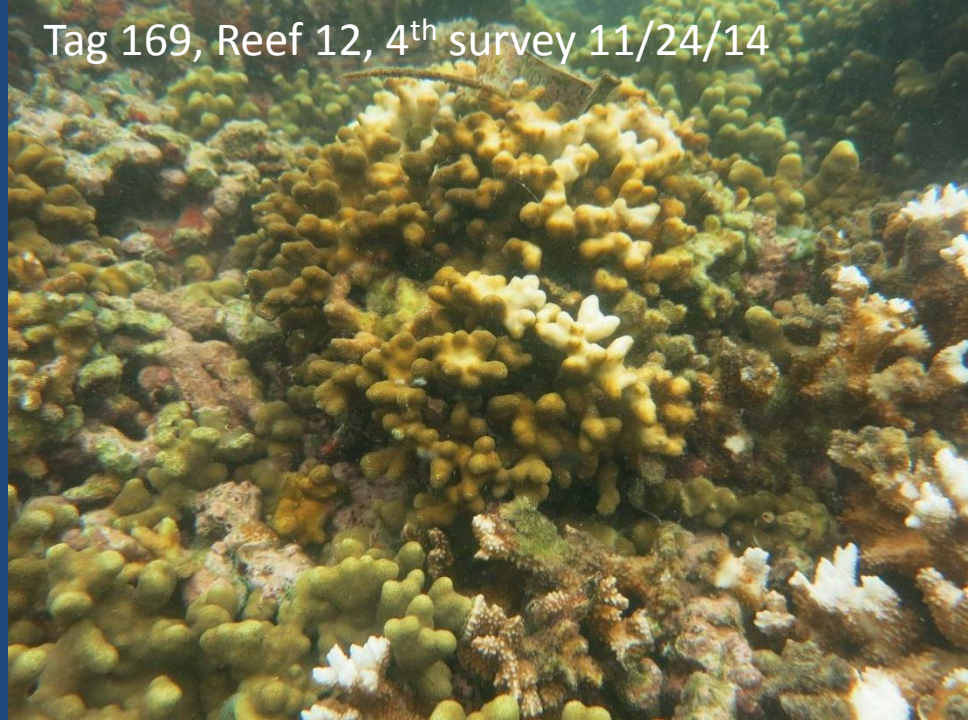
Tag 169, Reef 12, initial survey 10/6/14



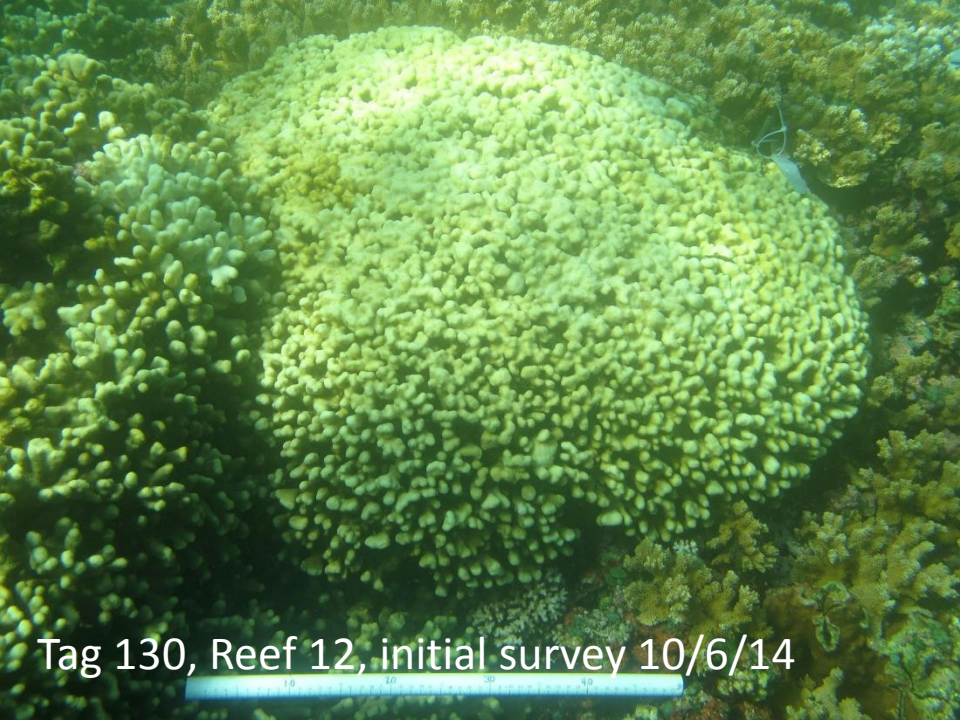
Tag 169, Reef 12, 2nd survey 10/15/14



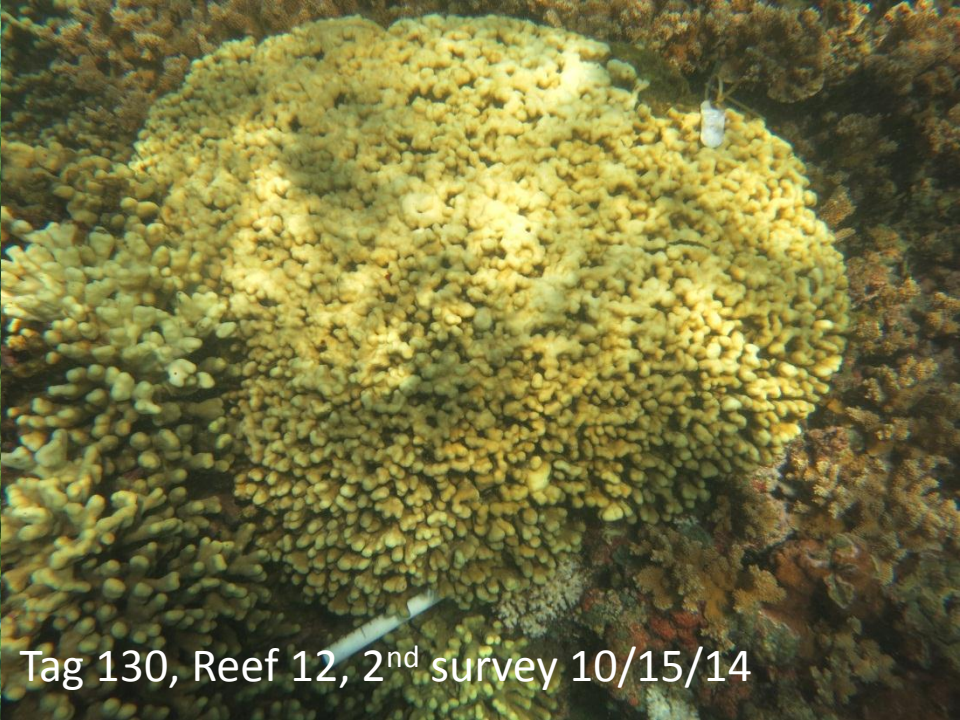
Tag 169, Reef 12, 3rd survey 10/27/14



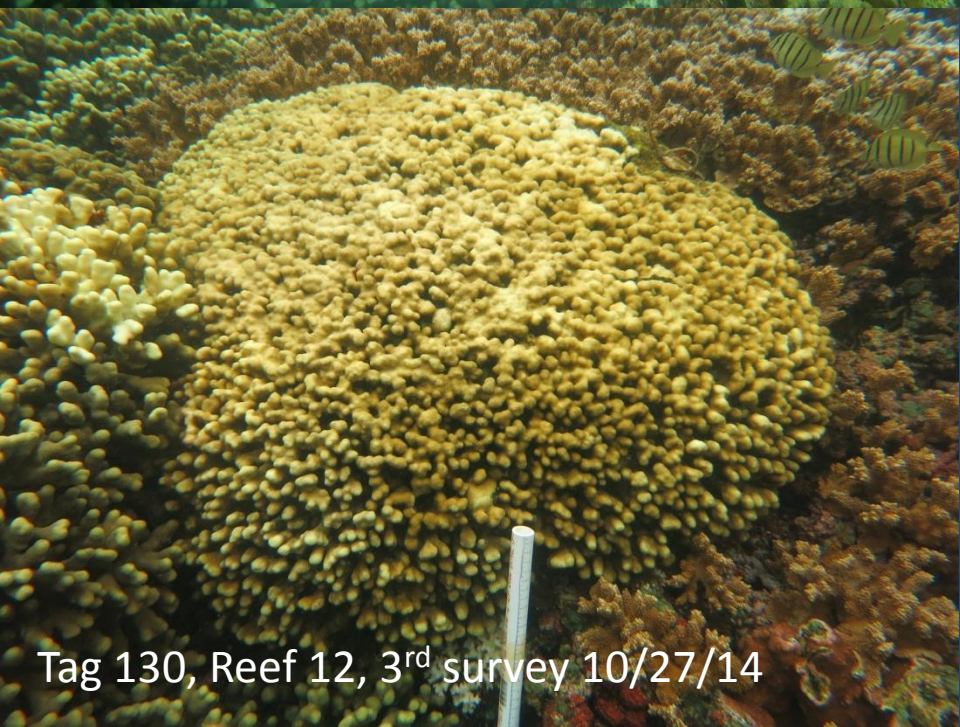
Tag 169, Reef 12, 4th survey 11/24/14



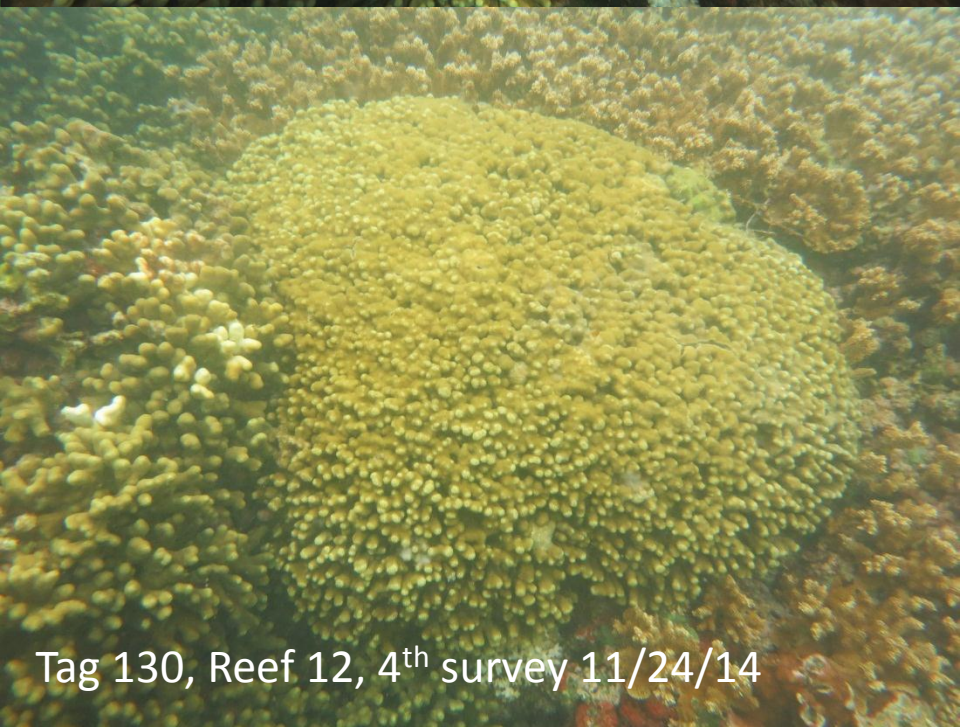
Tag 130, Reef 12, initial survey 10/6/14



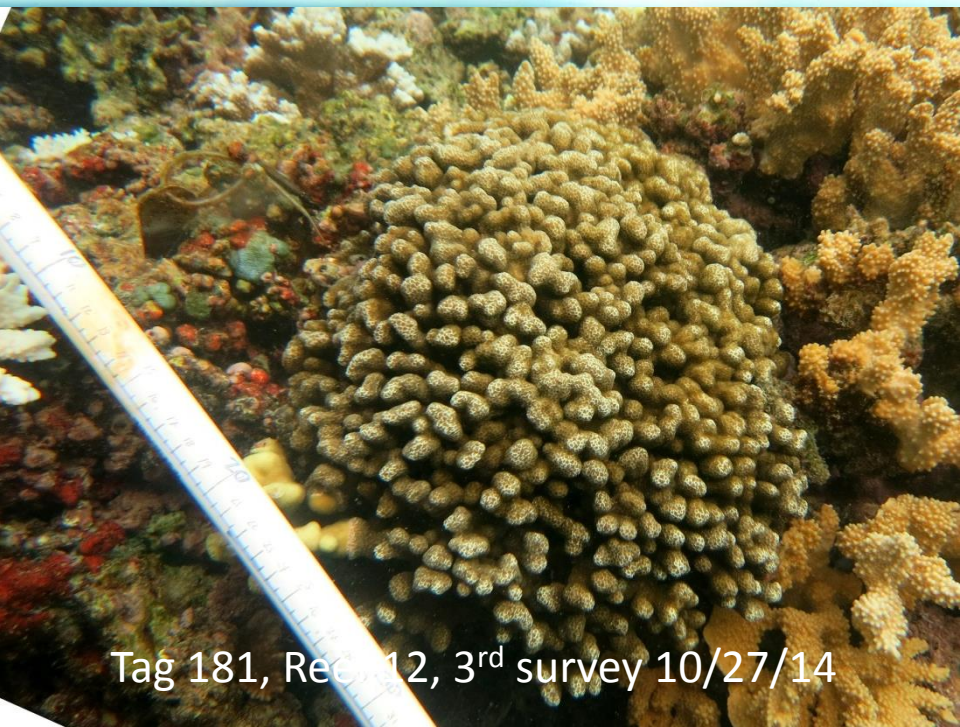
Tag 130, Reef 12, 2nd survey 10/15/14



Tag 130, Reef 12, 3rd survey 10/27/14



Tag 130, Reef 12, 4th survey 11/24/14

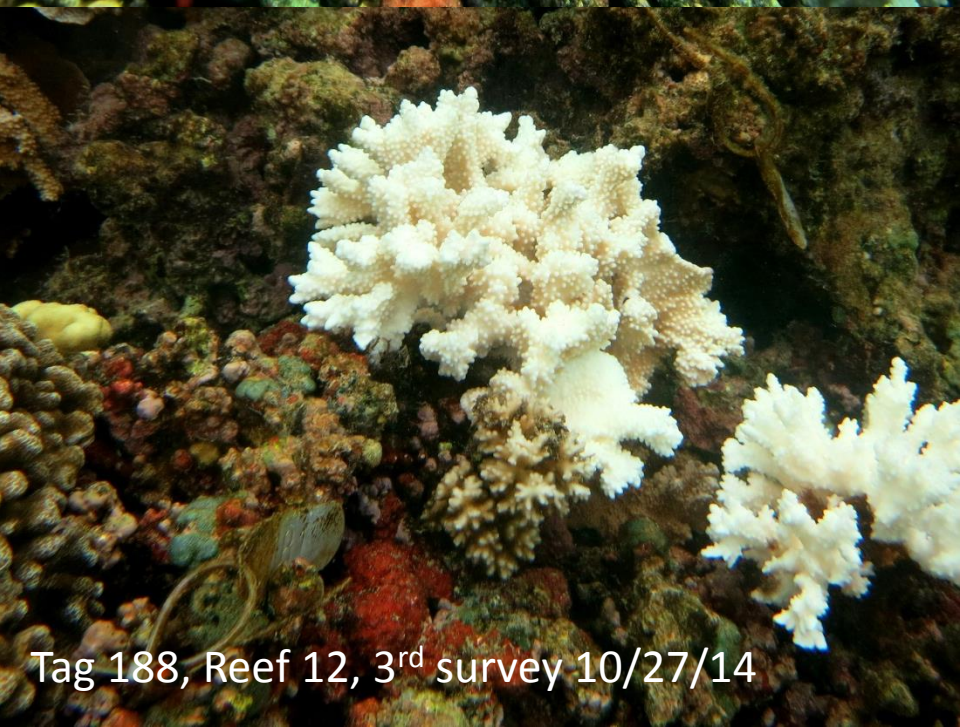




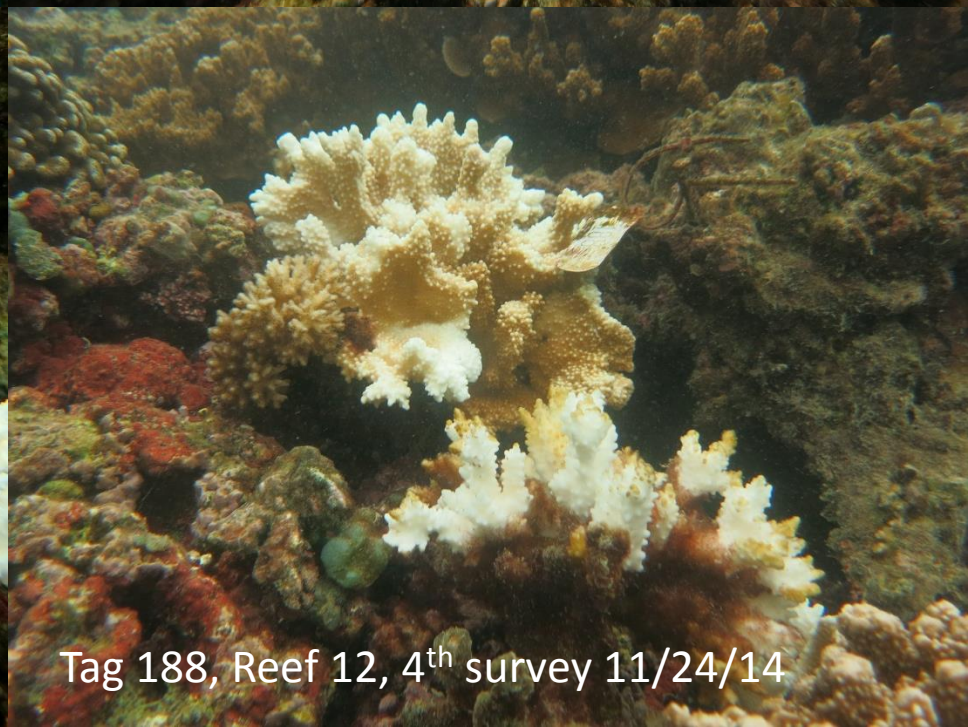
Tag 188, Reef 12, initial survey 10/6/14



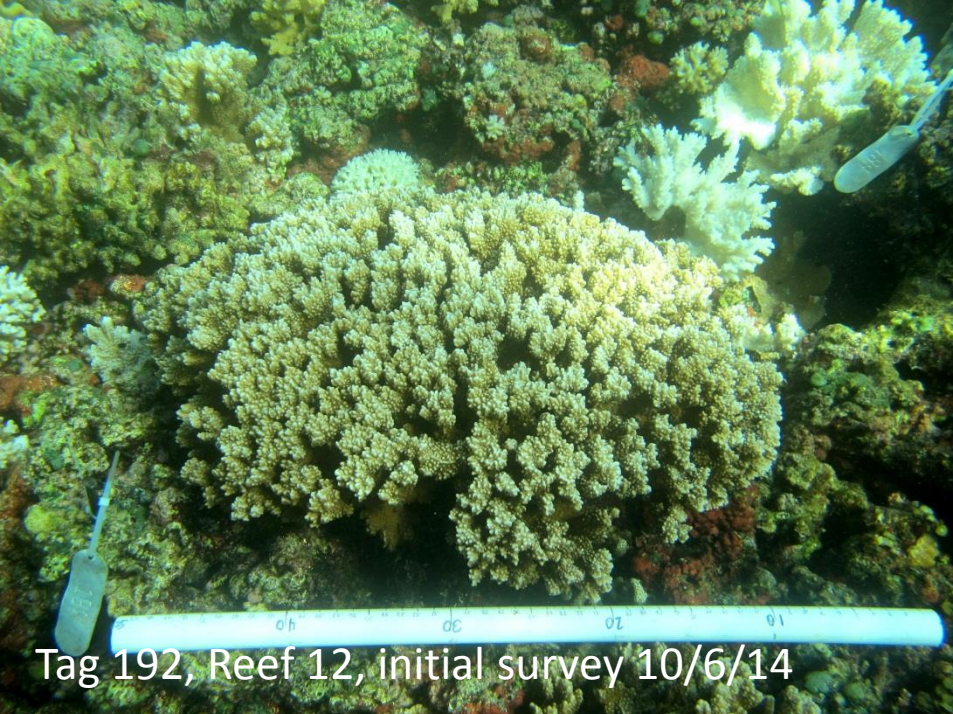
Tag 188, Reef 12, 2nd survey 10/15/14



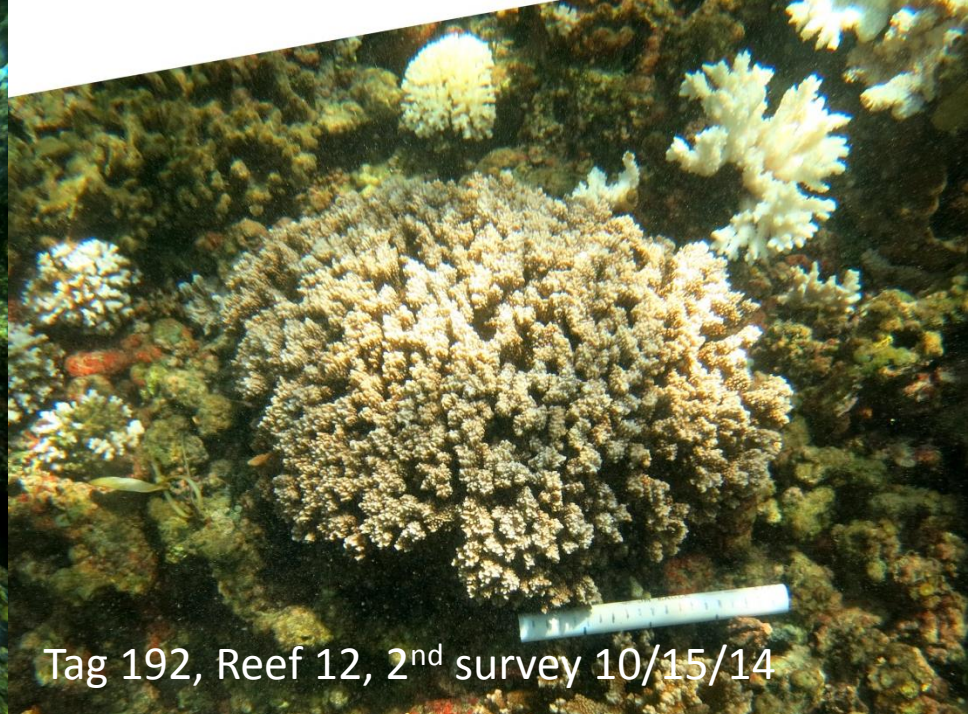
Tag 188, Reef 12, 3rd survey 10/27/14



Tag 188, Reef 12, 4th survey 11/24/14



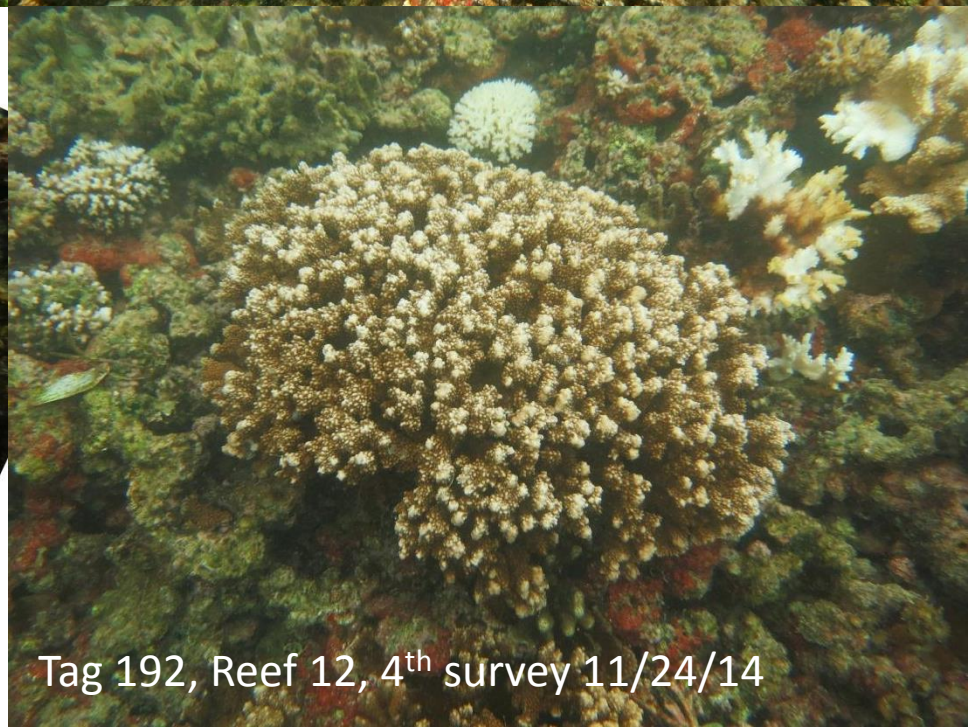
Tag 192, Reef 12, initial survey 10/6/14



Tag 192, Reef 12, 2nd survey 10/15/14

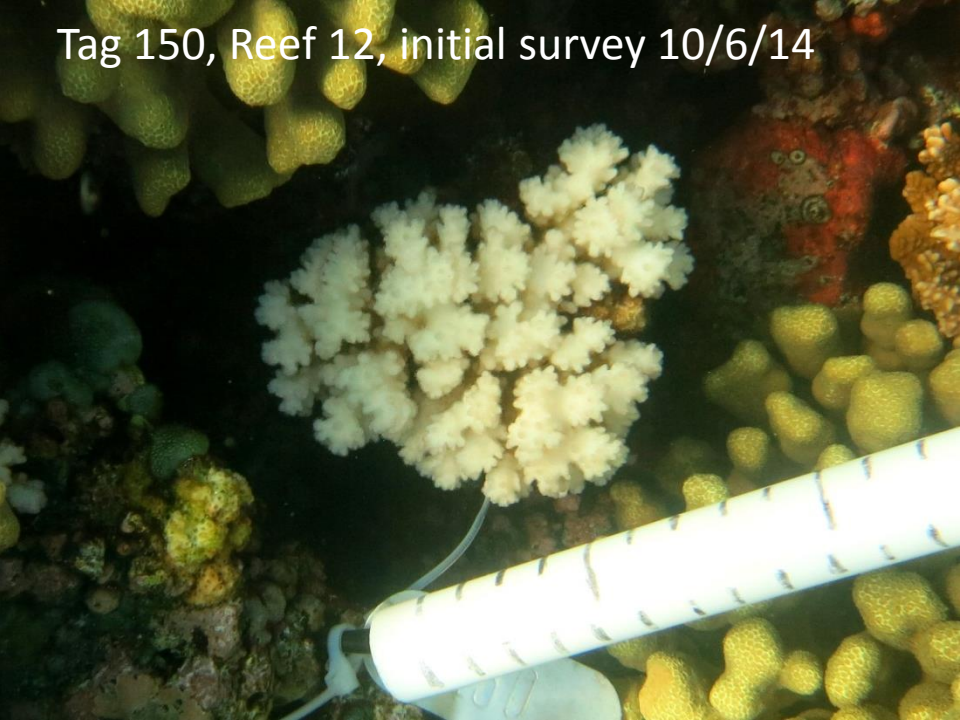


Tag 192, Reef 12, 3rd survey 10/27/14

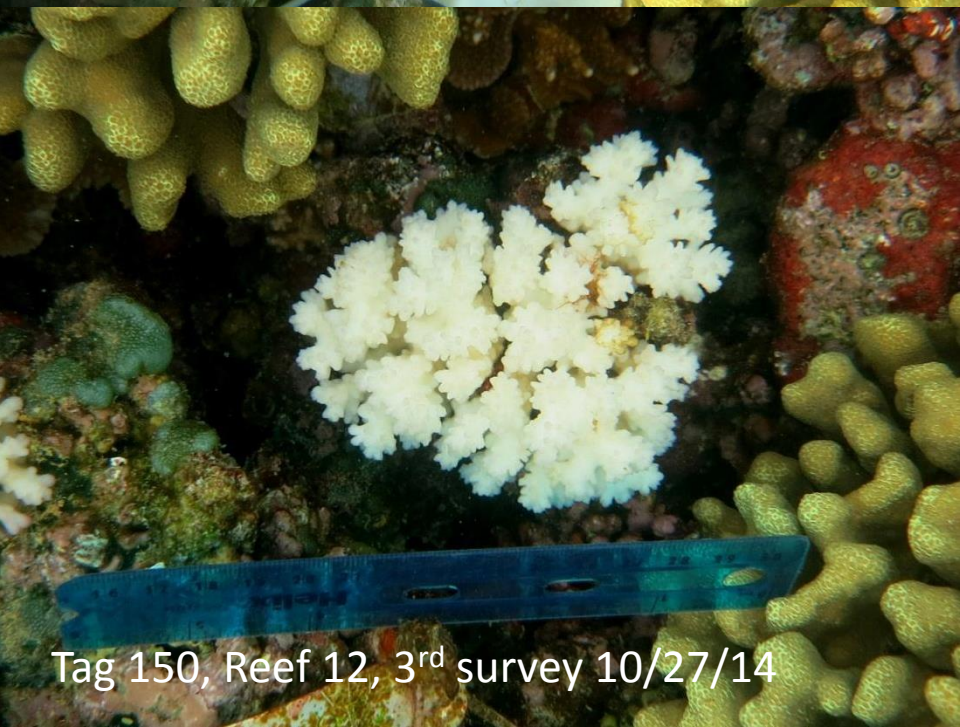
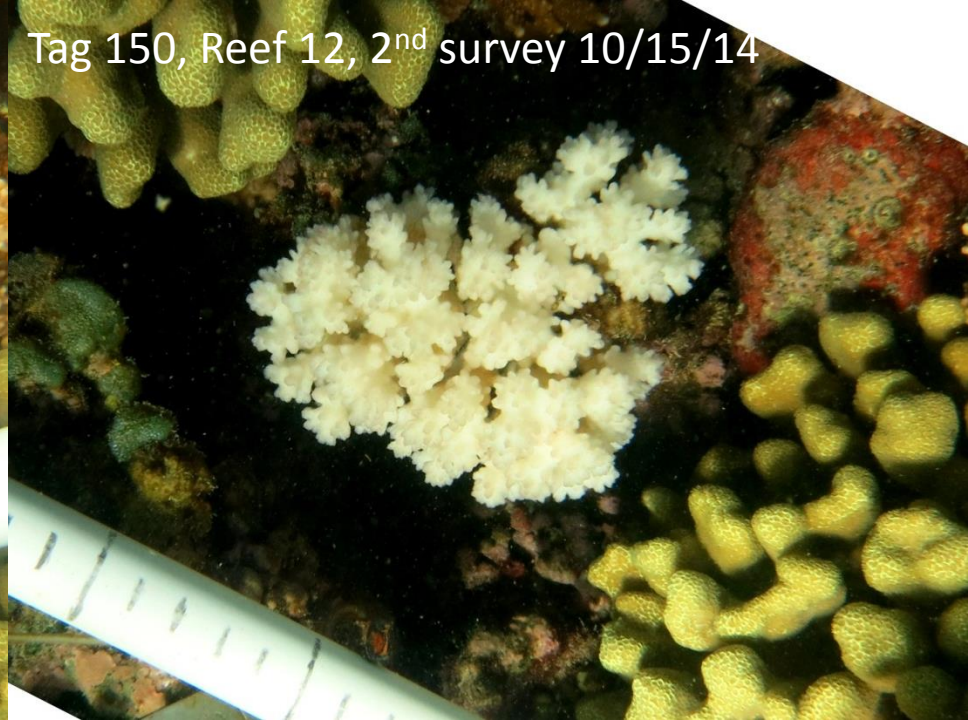


Tag 192, Reef 12, 4th survey 11/24/14

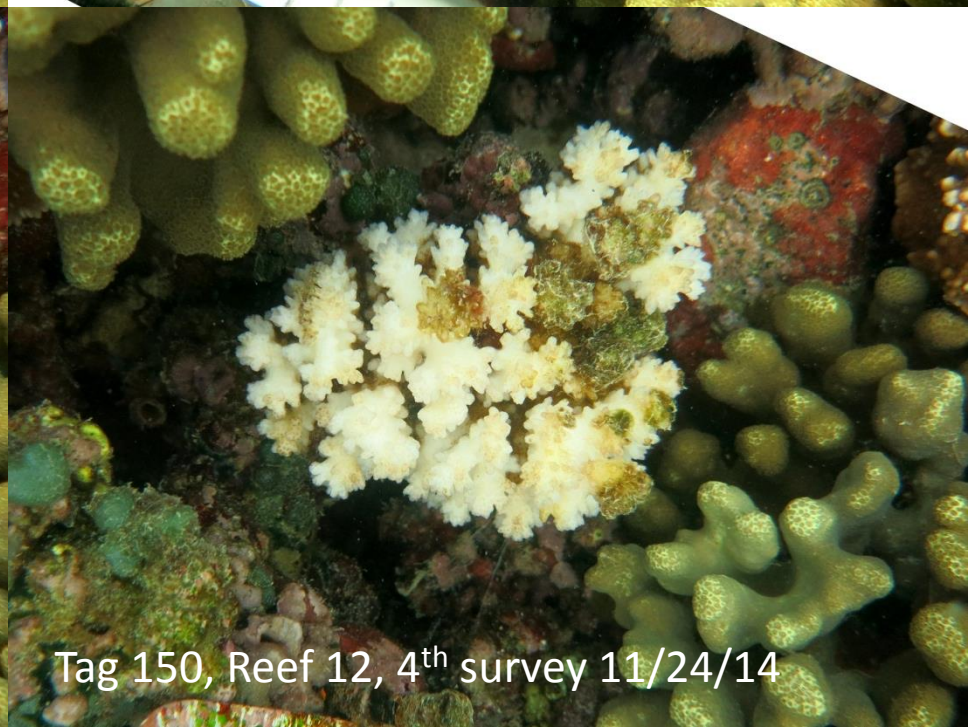
Tag 150, Reef 12, initial survey 10/6/14



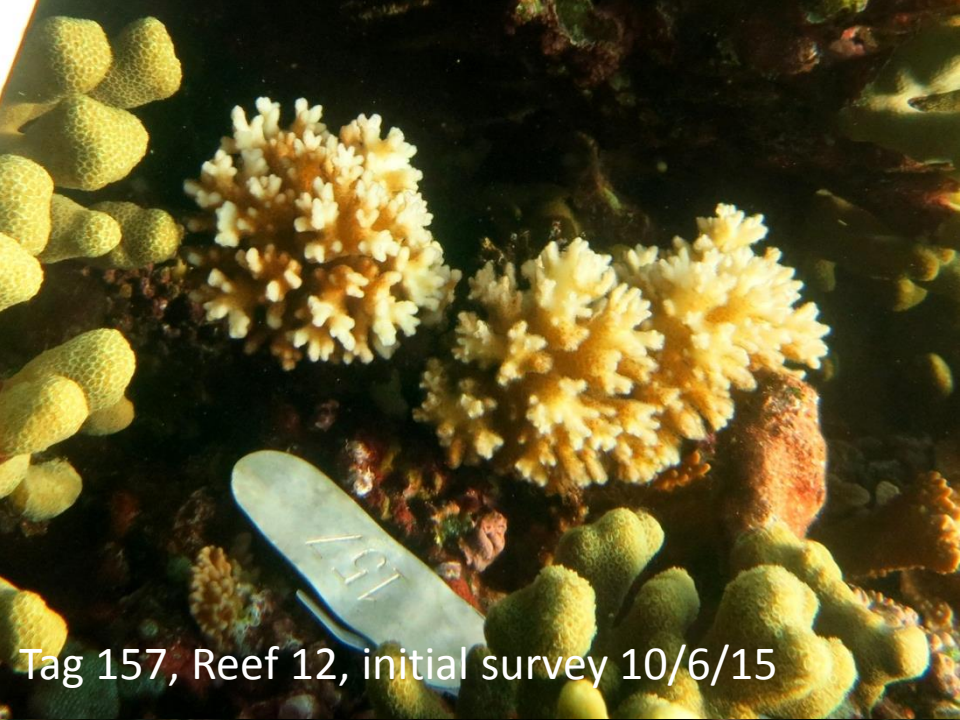
Tag 150, Reef 12, 2nd survey 10/15/14



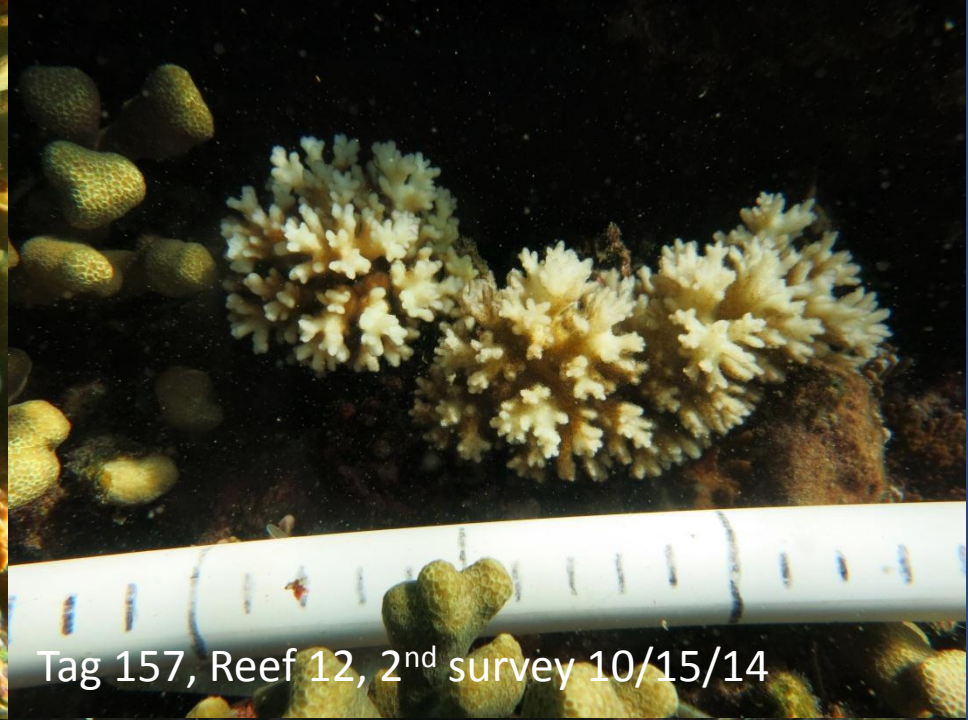
Tag 150, Reef 12, 3rd survey 10/27/14



Tag 150, Reef 12, 4th survey 11/24/14



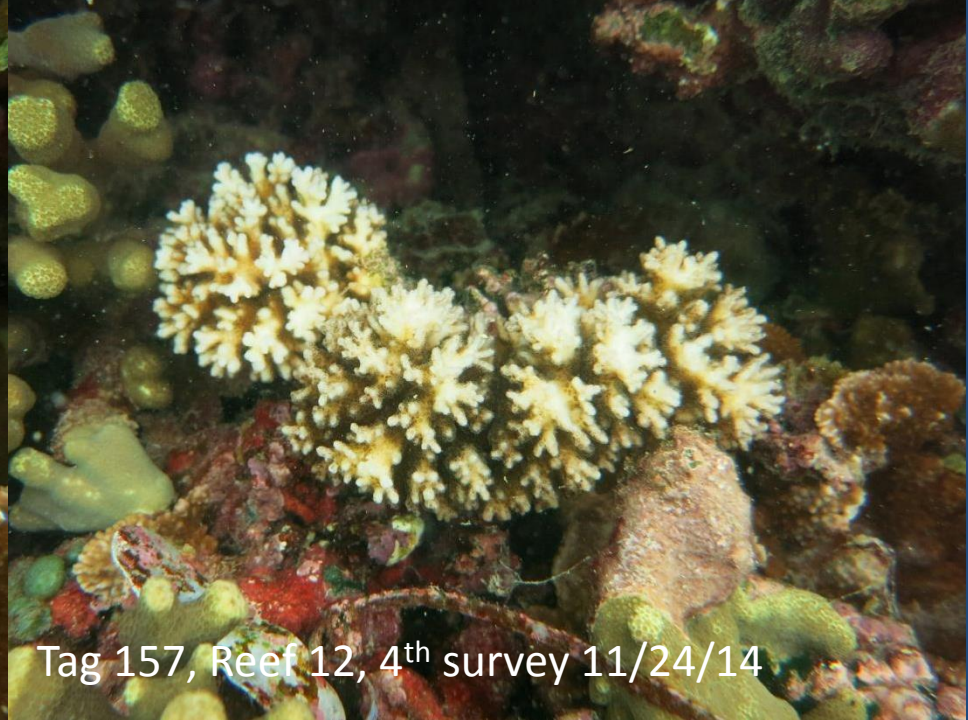
Tag 157, Reef 12, initial survey 10/6/15



Tag 157, Reef 12, 2nd survey 10/15/14



Tag 157, Reef 12, 3rd survey 10/27/14



Tag 157, Reef 12, 4th survey 11/24/14